



Notice of Meeting and Meeting Agenda Core Area Liquid Waste Management Committee

Wednesday, June 14, 2017

9:30 AM

6th Floor Boardroom
625 Fisgard Street
Victoria, BC V8W 1R7

L. Helps (Chair), S. Brice (Vice-Chair), M. Alto, R. Atwell, D. Blackwell, J. Brownoff, B. Desjardins (Board Chair, ex-officio), C. Hamilton, B. Isitt, N. Jensen, D. Murdock, C. Plant, D. Screech, L. Seaton, G. Young, Chief R. Sam, Chief A. Thomas

1. Approval of Agenda

2. Adoption of Minutes

- 2.1. [17-498](#) Minutes of the May 10, 2017 Core Area Liquid Waste Management Committee Meeting

Recommendation: That the minutes of the May 10, 2017 Core Area Liquid Waste Management Committee meeting be adopted as circulated.

Attachments: [Minutes](#)

3. Chair's Remarks

4. Presentations/Delegations

- 4.1. [17-507](#) Delegation: Darrel Woods Regarding Item 5.1. Wastewater Treatment Project Monthly Report - April 2017

Attachments: [Delegation: Darrel Woods](#)

5. Committee Business

- 5.1. [17-452](#) Staff Report for Information: Monthly Project Report - April 2017

Recommendation: That the Core Area Liquid Waste Management Committee receive the report and forward to the CRD Board for information.

Attachments: [Staff Report: Wastewater Treatment Project Monthly Report - April 2017](#)

[Appendix A: WTP Monthly Report - April 2017](#)

[Attachment 1: Project Board Response and Addt'l Information](#)

- 5.2. [17-287](#) Advanced Integrated Resource Management - Next Steps

Recommendation: That the Core Area Liquid Waste Management Committee receive this report for information.

Attachments: [Staff Report: Advanced Integrated Resource Management - Next Steps](#)
[Appendix A: Letter from Minister of Environment - Nov. 18, 2016](#)
[REVISED: Appendix B: Proposed Integrated Resource Management Work Plan](#)
[Appendix B: Proposed Integrated Resource Management Work Plan](#)
[Appendix C: Initial Assessment of Responses to RFEOI - HDR Inc.](#)
[Presentation: Slide](#)

6. Correspondence

6.1. [17-416](#) Correspondence: Resolution from the Integrated Resource
Management Advisory Committee

Recommendation: That the Core Area Liquid Waste Management Committee receive this correspondence
for information.

Attachments: [Correspondence: Resolution from IRMAC](#)

7. New Business

8. Adjournment

Next Meeting: September 13, 2017

To ensure quorum, please advise Pat Perna (pperna@crd.bc.ca) if you or your alternate CANNOT attend.

Meeting Minutes

Core Area Liquid Waste Management Committee

Wednesday, May 10, 2017

9:30 AM

6th Floor Boardroom
625 Fisgard Street
Victoria, BC V8W 1R7

PRESENT:

Directors: L. Helps (Chair), S. Brice (Vice-Chair), R. Atwell, D. Blackwell, J. Brownoff, C. Coleman (for M. Alto) C. Hamilton, L. Hundleby (for B. Desjardins), B. Isitt, N. Jensen, D. Murdock, C. Plant, D. Screech, L. Seaton, G. Young

Staff: L. Hutcheson, General Manager, Parks and Environmental Services; T. Robbins, General Manager, Integrated Water Services; N. Chan, Chief Financial Officer; S. Henderson, Manager, Real Estate; B. Reems, Corporate Officer; P. Perna, Committee Clerk (Recorder)

ABSENT: Chief R. Sam, Chief A. Thomas

The meeting was called to order at 9:30 am.

1. Approval of Agenda

**MOVED by Director Hamilton, SECONDED by Alternate Director Coleman,
That the agenda for the May 10, 2017 Core Area Liquid Waste Management
Committee meeting be approved as amended to include Correspondence Item
6.3: Resolution from the Integrated Resource Management Advisory Committee.
CARRIED**

2. Adoption of Minutes

- 2.1. [17-394](#) Minutes of the April 12, 2017 Core Area Liquid Waste Management Committee Meeting

**MOVED by Director Blackwell, SECONDED by Director Brice,
That the Minutes of the April 12, 2017 Core Area Liquid Waste Management
Committee meeting be adopted as circulated.
CARRIED**

3. Chair's Remarks

The Chair remarked on following:

- taking questions to present to the next Project Board meeting
- the Project Board considered all of the requests made by the Core Area Liquid Waste Committee and Victoria City Council at their open Project Board meeting on May 2, 2017
- the Project Board decided against re-opening the Harbour Resource Partners Contract
- improved public relations with Washington State due to the imminent ground breaking of the new treatment plant

4. Presentations/Delegations

- 4.1. [17-408](#) Delegation: Darrel Woods Re: Agenda Item 5.1. Wastewater Treatment Project Monthly Report - April 2017

Mr. Woods spoke on odour and noise level concerns and the need for release of further information to the public.

- 4.2. [17-409](#) Delegation: Marg Gardiner Re: Agenda Item 5.1. Wastewater Treatment Project Monthly Report - April 2017

M. Gardiner spoke to a PowerPoint presentation on odour, noise, the environmental impact study, slumps and erosion on the Dallas Bluffs, and the impacts to Dallas Road.

5. Committee Business

- 5.1. [17-390](#) Wastewater Treatment Project Monthly Report - April 2017

Chair Helps requested questions from the Committee to bring forward to the Project Board, through J. Bird, for immediate response, by way of a briefing note, and made public at the next meeting.

Questions were as follows:

1. In regards to there being an Esquimalt Liaison Committee, there is a need to establish a similar Liaison Committee in Saanich. When will they be doing that, since a pipeline and Hartland are both in Saanich?
2. Why is no one from the Project Board here?
3. Request for an appearance by Mr. Clancy to the Core Area Liquid Waste Management Committee for an introduction.
4. In Appendix C on page 4 of 4, it makes reference to 30 trucks per day over a 3-month period; is this the exact same truck route, or will there be different routes used?
5. Request for an item by item response to the questions from last month.

(Note: 6. was added to this list per a motion made under Correspondence Item 6.3. Further information on this is discussed in Correspondence Item 6.3.)

6. Why 50% raw residuals and not 100% raw residuals, to be considered, and addressing the letter regarding Resolution from the Integrated Resource Management Advisory Committee at the next Core Area Liquid Waste Management Committee meeting.
7. Provide confirmation that the Project Board is not simply spending to the Project budget and that they will work to realize cost savings where possible.

**MOVED by Director Isitt, SECONDED by Director Hamilton,
That the report be postponed until the June 14, 2017 Core Area Liquid Waste
Management Committee meeting.
CARRIED**

6. Correspondence

- 6.1. [17-405](#) Letter from Jane Bird, Chair, Core Area Wastewater Treatment Project Board to Core Area Liquid Waste Management Committee (May 8, 2017)

**MOVED by Director Brownoff, SECONDED by Alternate Director Hundleby,
That this item of correspondence be received for information.
CARRIED**

- 6.2. [17-396](#) Letter from Washington State Representative Jeff Morris, March 27, 2017, to Mayor Helps re Wastewater Treatment Facility

**MOVED by Director Brownoff, SECONDED by Director Blackwell,
That this item of correspondence be received for information.
CARRIED**

- 6.3. [17-416](#) Correspondence: Resolution from the Integrated Resource Management Advisory Committee

Discussion ensued on the following:

- Integrated Resource Management Plan Next Steps
- the formal procurement process, which will include consideration for both Class A biosolids and raw sludge
- why the allowance for the Residuals Treatment Facility to receive up to 50% of raw residuals produced from McLoughlin Point Wastewater Treatment Plant rather than 100%
- reviewing the elements of the application to lower the costs
- reviewing the mandate of the Project Board

**MOVED by Director Brownoff, SECONDED by Director Blackwell
That the Core Area Liquid Waste Management Committee receive the
correspondence for information.**

**MOVED by Director Plant, SECONDED by Director Isitt,
That the Core Area Liquid Waste Management Committee report out on the same
memo to the Core Area Wastewater Treatment Project Board, why 50% raw
sewage and not 100% raw sewage, is to be considered.
CARRIED**

**MOVED by Director Plant, SECONDED by Director Isitt,
That the Core Area Liquid Waste Management Committee postpone
consideration of the correspondence until the June 14, 2017 Core Area Liquid
Waste Management Committee meeting.
CARRIED**

7. New Business - None.

8. Motion to Close the Meeting

8.1. [17-395](#) Motion to Close the Meeting

MOVED by Director Plant, **SECONDED** by Director Hamilton,
That the meeting be closed in accordance with the Community Charter Part 4,
Division 3, 90(1), (e), the acquisition, disposition or expropriation of land or
improvements, if the board considers that disclosure could reasonably be
expected to harm the interests of the regional district.
CARRIED

The Committee moved to the closed session at 10:05 am.
The Committee rose from the closed session at 10:20 am without report.

9. Adjournment

MOVED by Director Plant, **SECONDED** by Director Hamilton,
That the Core Area Liquid Waste Management Committee meeting be adjourned
at 10:20 am.
CARRIED

Chair

Recorder

From: Legserv
Subject: FW: Addressing the Board - Submission

Sent: Monday, June 12, 2017 4:22 PM
To: Legserv <Legserv@crd.bc.ca>
Subject: Addressing the Board - Submission

Your name::
Darrel Woods

Municipality/Electoral Area in which you reside::
Victoria

I wish to address::
Core Area Liquid Waste Management Committee

Meeting Date::
Jun 14, 2017, 9:30am

Agenda Item::
5.1. 17-452 Wastewater Treatment Project Monthly Report -

My reason(s) for appearing (is/are) and the substance of my presentation is as follows::
To comment on the Clover Point Forcemain and Dallas Road route and information available to the public. Thank you.

I will have a PowerPoint or video presentation and will submit it at least 24 hours in advance of the meeting.:
No

The meeting and my presentation will be webstreamed live via the CRD website and recorded.:
I understand.



**REPORT TO CORE AREA WASTEWATER TREATMENT PROJECT BOARD
MEETING OF TUESDAY, JUNE 6, 2017**

SUBJECT **Wastewater Treatment Project Monthly Report - April 2017**

ISSUE

The Core Area Wastewater Treatment Project Board (Project Board) is required, by its Terms of Reference, to provide the Capital Regional District (CRD) Board with monthly progress reports and a comprehensive quarterly report.

BACKGROUND

On May 25, 2016 the Regional Board of the CRD:

- i) Adopted by resolution the Core Area Wastewater Treatment Project Board Terms of Reference (Project Board Terms of Reference) for the purposes of establishing principles governing the Core Area Wastewater Treatment Project (the Wastewater Treatment Project or the WTP);
- ii) Established the Core Area Wastewater Treatment Project Board (Project Board) under Bylaw 4109 (the CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016) for the purposes of administering the Core Area Wastewater Treatment Project; and
- iii) Delegated certain of its powers, duties and functions to the Project Board under Bylaw 4110 (the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016).

On September 14, 2016 the Regional Board of the CRD:

- i) Received the final report of the Project Board with respect to its recommendation for the CAWTP, dated September 7, 2016 (the Final Report); and
- ii) Approved the business case attached as Appendix 1 (the Business Case) to the Final Report.

The Business Case established the CAWTP control budget (the Control Budget) of \$765 million.

The CRD Core Area Wastewater Treatment Project Board (the Project Board) Terms of Reference requires, amongst other things: that the Project Board provide the CRD Board with monthly progress reports and a comprehensive quarterly report on the Project.

DISCUSSION

The Project Board, at its May 2, 2017 meeting, received a report that outlined the Project Team's intent for monthly reporting in order to align financial reporting with activities reporting. The Project Team proposed that the monthly report for the month of April 2017 be received by the Project Board at its June 6, 2017 meeting, in order to allow the monthly reports to cover activities and financial information for the same reporting period.

The monthly report for the month of April 2017 is attached as Appendix A.

RECOMMENDATION

That the Core Area Wastewater Treatment Project Board approve the following resolution:

RESOLVED that:

1. The Wastewater Treatment Project Monthly Report – April 2017 be received for information.
2. The Wastewater Treatment Project Monthly Report – April 2017 be forwarded to the Core Area Liquid Waste Management Committee and Capital Regional District Board for information.



Elizabeth Scott, Deputy Project Director
Wastewater Treatment Project



Dave Clancy, Project Director
Wastewater Treatment Project
Concurrence

Attachments: 1

Appendix A: Wastewater Treatment Project Monthly Report – April 2017

ES:dd



Wastewater Treatment Project

Treated for a cleaner future

CRD Wastewater Treatment Project

Monthly Report

Reporting Period: April 2017



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1 Executive Summary

1.1 Introduction

The Wastewater Treatment Project (the “WTP” or the “Project”) includes three main Project components (the “Project Components”): the Residuals Treatment Facility (the “RTF”), the McLoughlin Point Wastewater Treatment Plant (the “WWTP”) and the Conveyance System (which includes upgrades to the conveyance network, including the construction of pump stations and pipes). The Project scope will be delivered through a number of contracts with a variety of contracting strategies.

Overall the Project is progressing as planned. After signing the WWTP contract with Harbour Resource Partners (HRP) in March, the WWTP moved into the construction phase. The construction phase of the WWTP is progressing in line with the schedule, with materials and equipment beginning to be mobilized and construction sites being prepared.
















The RTF is in the procurement phase and progressed from the Request for Qualifications (“RFQ”) stage to the Request for Proposals (“RFP”) stage in the reporting period. Following the successful completion of the RFQ stage a shortlist of three proponents were issued with the RFP. The RFP activity is on track with technical submissions due in September 2017 and financial submissions due in October 2017 from the three proponents.

The highlights of the Conveyance System activities in this reporting period were the development of the RFP for the Clover Point Pump Station and the RFQ for Macaulay Point Pump Station and Forcemain.

1.2 Dashboard





Table 1 indicates the high level status of the Project and each Project Component with regards to the six Key Performance Indicators (“KPI”) that were defined within the Project Charter. For the reporting period the Project KPI’s have been met and Project implementation is on plan.

Table 1 - Executive Summary Dashboard

Key Performance Indicators		WTP Project Overall	WWTP	RTF	Conveyance System	Comments
Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency (TRIF) of no more than 1*.					No safety issues
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction.					No environmental issues.
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.					No regulatory issues.
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.					Extensive engagement activities completed in the reporting period; more information will be provided as it becomes available and focused engagement will be undertaken around Ogden and McLoughlin Point construction activities.
Schedule	Deliver the Project by December 31, 2020.					No schedule issues.
Cost	Deliver the Project within the Control Budget (\$765 million).					Project expenditures within Control Budget.

* A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work.

KPI Status Key

Status	Description
	KPI unlikely to be met
	KPI at risk unless corrective action is taken
	KPI at risk but corrective action has been identified/is being implemented
	Good progress against KPI

2 Wastewater Treatment Project Progress

2.1 Safety

Safety information for the reporting period and cumulative for the Project from January 1, 2017 is summarised in Table 2. In April the TRIF for the WTP inclusive of Project Contractors and Project Management Office staff was zero. No recordable incidences were reported in the reporting period. No corrective actions were required due to there being no open recordable incidents.

HRP was the only Project Contractor during the reporting period. HRP began mobilization to WWTP works sites during the reporting period, and mobilized 10 staff.

The Project Management Office (“PMO”) staffing level increased over the reporting period, with the PMO staff increasing from 8 to 14 full time equivalents (“FTE”).

The key safety management activity completed during the reporting period was the review of HRP’s Health, Safety and Environmental Plan. This Plan was reviewed and accepted by the PMO.

Table 2 - WTP Safety Information

	Reporting Period (April 2017)	Project Total to-Date (from January 1, 2017)
Person Hours		
CRD PMO	1160	4137
Project Contractors	1420	5633
Total Person Hours	2580	9770
Number Of Employees		
CRD PMO	14	
Project Contractors	10	
Total Number Of Employees	24	
Number Of Occurrences		
Near Miss Reports	0	0
High Potential near Miss Reports	0	0
Report Only	0	0
First Aid	0	0
Medical Aid	0	0
Medical Aid (Modified Duty)	0	0
Lost Time	0	0
Total Recordable Incidents	0	0

	Reporting Period (April 2017)	Project Total to-Date (from January 1, 2017)
Frequency Rates		
First Aid Frequency	0	0
Medical Aid Frequency	0	0
Lost Time Frequency	0	0
Total Recordable Incident Rate	0	0

2.2 Environment and Regulatory Management

2.2.1 Environment

The key environmental management activities that were completed during this reporting period are as follows:

- Draft archaeological permit associated with the geotechnical drilling for the Clover and Macaulay forcemains sent to Millennia, the Project's archaeological advisors, for review;
- PMO team reviewed the HRP WWTP Early Works Construction Environmental Protection Plan and returned comments.

2.2.2 Regulatory Management

The Project Team continued to progress the construction-related regulatory approvals as planned. The permitting activities for the reporting period involved engagement with the municipal, provincial and federal government departments as summarised in Table 3.

Table 3 - Regulatory Approvals Permitting Activities

Government Authority Level	Activity
Municipal	<ul style="list-style-type: none"> • The City of Victoria Technical Working Group met and the first District of Saanich Technical Working Group meeting was planned.
Provincial	<ul style="list-style-type: none"> • The Project Team progressed Heritage Act permits and operational permits required for the McLoughlin Point Wastewater Treatment Plant.
Federal	<ul style="list-style-type: none"> • The Project Team progressed the Transport Canada Facility Alteration Permits for the construction of the McLoughlin Point outfall and harbour crossing conveyance line. • Operational and progress update meetings with Department of National Defence ongoing.

The timely availability of the various Project permits reflect an area of key management focus due to the potential Project progress impacts. The regulatory management activities were in line with the planned Project progress for the period.

2.3 Schedule

All scheduled activities were completed as planned. The procurement phase of the WWTP Project Component was completed and the Project Component moved into the construction phase which progressed in line with HRP's schedule. The RTF Project Component is in the procurement phase and is on-track to be completed in line with the schedule. The Conveyance System Project Component progressed in line with the schedule with procurement planning progressing on Clover Point Pump Station and Macaulay Point Pump Station and Forcemain.

Figure 1 shows the high-level Project schedule.

Given the early execution stage of the Project a number of Project planning related activities were ongoing over the reporting period. Key amongst these were schedule integration activities including:

- Refinement of the Project schedule to align with the Work Breakdown Structure ("WBS") framework;
- Review of HRP's baseline schedule and incorporation into the Project's schedule; and,
- Cost-loading the Project schedule with the Control Budget.

Figure 1 – High-Level Project Schedule



2.4 Cost Management and Forecast

The Project summary cost report for the reporting period is shown in Figure 2 below. Further information is available in Appendices A and B. The cost report summarizes Project expenditures and commitments by the three Project Components and the major cost centres common to the Project Components. The Project expenditures for the reporting period were as expected and the forecast to completion remains the Control Budget (\$765 million), with no variance. No contingency or program reserve was drawn upon during the reporting period.

The main Project expenditures incurred over the reporting period were associated with: WWTP construction activities; third-party commitments; communications and engagement activities and PMO-related costs.

Figure 2 – Project Summary Report Month End April 30, 2017

	Budget	Cost to Date	Commitments Unpaid	Total CTD + CU	Forecast to Complete	Forecast to Completion	Variance	Variance from Last report
WASTEWATER TREATMENT PLANT	384.8	13.6	289.2	302.8	82.0	384.8	-	-
CONVEYANCING - PUMP STATIONS & PIPES	188.5	17.5	-	17.5	171.1	188.5	-	-
RESIDUALS TREATMENT FACILITY	191.6	5.5	-	5.5	186.2	191.6	-	-
COMMON COSTS**	-	8.3	8.8	17.0	(17.0)	-	-	-
INTERIM FINANCING*	-	0.6	-	0.6	(0.6)	-	-	-
PROGRAM CONTINGENCY*	-	-	-	-	-	-	-	-
LWMP - PROJECT BOARD*	-	7.5	-	7.5	(7.5)	-	-	-
TOTAL	765.0	52.8	298.0	350.8	414.1	765.0	-	-

* The budget for common costs, interim financing, program contingency and Project Board are allocated directly to the project components.

** Common costs include BCHydro, Third Party Commitments and Project Management Office

The allocation of the Project's Control Budget, and associated implementation of the Prolog Project cost management software system was ongoing during the reporting period. Project costs and forecast costs to completion will be reported against the allocated Control Budget in the next monthly report.

2.5 Project Status (Engineering, Procurement and Construction)

The Project Components are at different stages of engineering, procurement and construction. All components are progressing according to plan.

The WWTP is in the construction phase. The construction phase of the WWTP is progressing in line with the schedule, with HRP furthering design and beginning to mobilise materials and equipment, and prepare construction sites.

The RTF is in the procurement phase and progressed from the RFQ stage to the RFP stage in the reporting period. Following the successful completion of the RFQ stage a shortlist of three proponents were issued with the RFP. The RFP activity is on track with technical submissions due in September 2017 and financial submissions due in October 2017 from the three proponents.

The Conveyance System is in the engineering phase. Efforts related to the Conveyance System were focused on preparing the indicative designs, including the alignments, and developing the RFP for the Clover Point Pump Station and the RFQ for Macaulay Point Pump Station and Forcemain.

2.6 First Nations

First Nations communication and engagement was ongoing and progressed as planned over the reporting period.

The following activities were completed in the reporting period:

- Submitted First Nations engagement log to Transport Canada (TC) as part of the permit approval process for the harbour crossing and outfall application and Transport Canada's duty to consult First Nations;
- Letters of project notification were prepared and sent to neighbouring First Nations governments;
- Initial planning meetings were held with Esquimalt and Songhees administrators to discuss the First Nations Liaison positions. The Esquimalt and Songhees Nations explored a joint approach to managing the positions and the Terms of Reference were jointly developed;
- Archeology responsibilities were defined:
 - A site specific permit was submitted by the PMO to the Archaeology Branch, in order to allow geotechnical drilling to be undertaken. A mandatory 30 day referral process to neighbouring Nations (beyond Songhees and Esquimalt Nations) was initiated, with an expectation of a permit decision from the Archaeology Branch in mid-June; and
 - Millennia were retained as the Project's archaeological advisor, and were tasked with overall oversight of archeological activities, including First Nations cultural protocol development.

2.7 Stakeholder Engagement

The Project maintained its ongoing two-way Communications and Engagement Plan over the reporting period to provide Project information to stakeholders, communities and the public and to respond to public inquiries. A variety of materials and methods supported the implementation of the Communications and Engagement Plan, including a public inquiry program, Project website updates, social media, construction notifications, community and stakeholder meetings, and door-to-door notifications.

The following activities were completed in the reporting period:

- Meetings with the following community groups:
 - James Bay Neighbourhood Association;
 - Ecole Macaulay Elementary School;
 - James Bay Community School; and
 - Victoria West Community Association.

- Two Community Information meetings were held; one in Victoria, and one in Esquimalt. Over 300 people attended the meetings, which were publicized widely through mailed notices to residents, email, newspaper advertisements, social media, and on the Project website. The meetings provided an opportunity for residents to learn more and have questions answered, particularly regarding the Project schedule, noise, odour and upcoming construction at Ogden Point and McLoughlin Point. 27 members of the Project Team and HRP attended the meetings and were available to answer questions.
- Project Updates were developed and distributed:
 - Project Update #1 was developed for the Community Information Meetings and posted to the website;
 - Project Update #2 was developed and posted to the Project website; mailed to 7,500 households in James Bay; and emailed to our stakeholder list;
- Updates to the Project Website were made:
 - Project information boards were developed for the community information meetings and posted to the website;
 - Project information sheets were developed for the community meetings and posted to the Project website on: Construction Schedule; McLoughlin Point Wastewater Treatment Plant: Noise During Operations; Odour Control: McLoughlin Point Wastewater Treatment Plant; Ogden Point Noise Mitigation; and, Clover Point Pump Station;
 - A new “Community Questions” page was created with commonly-asked questions and answers;
 - A media release on the Residuals Treatment Facility Proponents Shortlisted for the Wastewater Treatment Project was prepared and issued; and
 - A media release on the McLoughlin Point Wastewater Treatment Plant Contract Awarded was prepared and issued.
- The Project public information line was set up so that members of the public can call a number 24-7: 1-844-815-6132;
- Public e-mail inquiries were responded to;
- Correspondence with James Bay Neighbourhood Association was prepared and issued; and
- Terms of reference were developed with Esquimalt Liaison Committee

As construction plans are advanced and specific work schedules are finalized over the coming months, the Project Team will schedule further meetings with stakeholders and continue to update the Project website so as to continue to provide Project information and hear questions and concerns.

2.8 Key Risks and Issues

The Project Team actively-identified and managed Project risks over the reporting period.

Table 4 summarises the highest-level risks that were actively managed over the reporting period, as well as the mitigation steps identified and/or undertaken over the reporting period.

Table 4 - WTP Risk Summary

Risk No.	Risk	Risk Status	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level (based on likelihood and potential impact)	Trend in risk level from previous reporting period
1	First Nations engagement	The assessed risk level reflects the PMO's priority of establishing strong and effective relationships with First Nations interfacing with, or interested in, the Project.	First Nations engagement activities remained ongoing over the reporting period (see section 2.5 for further details).	M	No change
2	PMO Start up: development and implementation of systems, plans and processes	The roll-out of PMO systems and the development of the Project Management Plan and key subsidiary plans was ongoing over the reporting period. The Communications and Engagement Plan was completed and issued.	The development of Project management plans and supporting systems implementation remained ongoing as resources were hired. Advisors were also engaged to provide support on an interim basis.	M	No change
3	PMO Start up: Hiring of staff	The hiring of key staff was of increasing priority with a number of senior staff operating in interim capacities across a number of functional and project management roles.	Hiring of project office staff continued over the period, with the PMO FTEs increasing from 8 to 14.	M	No change
4	Divergent interests between multiple parties and governance bodies whose co-operation is required to successfully deliver the project	As detailed in section 2.9 a number of local government authorities and management committees met over the period and passed resolutions.	The Project Board considered and responded to resolutions from other governments. The Project Team either has or plans to establish a technical working group with each of the three core area municipalities most directly affected by construction (Victoria, Esquimalt, and Saanich).	M	No change
5	Misalignment between Project objectives/scope and stakeholder expectations	The assessed risk level reflects the PMO's priority of establishing strong and effective community stakeholder engagement.	Extensive community engagement activities were undertaken over the reporting period. In addition, the Project Team either has or intends to establish community committees in the three core area municipalities most directly affected by construction (Victoria, Esquimalt, and Saanich).	M	No change

2.9 Resolutions from Other Governments

2.9.1 Core Area Liquid Waste Management Committee

The Project Board received a number of resolutions from the Core Area Liquid Waste Management Committee's (CALWMC) April 12th meeting. The Project Board considered these resolutions at its May 2nd meeting and directed staff to prepare the response. The CALWMC's resolutions are in italics and the Project Board's responses follow.

That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board, that the Wastewater Treatment Project Quarterly Report - Reporting Period December 25, 2016 to March 24, 2017 be received for information.

Amendment:

That future Wastewater Treatment Project Quarterly Reports include a section 11.3 that indicates stakeholder issues and responses from the Project Board.

The Project Board agrees with this request and has directed the Project Team to include in future Wastewater Treatment Project Quarterly Reports a summary of key themes and responses from correspondence received during the reporting period.

That the CRD Board request that the Core Area Wastewater Treatment Project Board:

- 1. Explore a Change Order with Harbour Resource Partners to ensure that enforceable performance Standards are in place upon completion of the McLoughlin Point waste-water treatment plant to ensure that odour levels do not to exceed 2 Odour Units.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation to not explore a Change Order with Harbour Resource Partners (HRP).

The guiding principle for the design of the McLoughlin Point Wastewater Treatment Plant is that there will be no detectable odour by residents. The contract with HRP specifies that:

- All process tankage must be covered, which will result in one of the highest levels of odour capture and treatment in the industry;
- The plant include a robust and reliable treatment strategy consisting of a two stage odour control system utilizing a bioscrubber followed by activated carbon, that is capable of treating all odorous air streams;
- Back-up odour control equipment and back-up power generators be installed, to reduce the possibility of odour escaping the plant in the unlikely event there is an equipment or power failure; and,
- A 24 hour odour control monitoring system be installed, to ensure that odour requirements are met or exceeded.

Under normal operating conditions atmospheric odour modelling predicts that the odour at the plant's property line will be approximately two odour units. The performance standard within the

contract of up to five odour units provides a margin to deal with an extraordinary event such as an equipment or power failure. The CRD will maintain the facility in accordance with an asset management plan that will mitigate the risk of any such failures.

The scope of the contract with HRP includes the design, build and finance of the McLoughlin Point Wastewater Treatment Plant. The contract is structured such that third party debt capital is at risk until HRP can demonstrate that the plant has satisfactorily achieved operational capability, including compliance with contract odour specifications. Such performance will have to be demonstrated continuously over a 90 day acceptance period for HRP (and their lenders) to receive full payment. In determining whether to put their capital at risk, third party lenders satisfied themselves that HRP's designs are capable of meeting the contract specifications; including the odour specifications.

In addition, HRP must demonstrate that the plant can meet the contract standards with respect to odour performance during a two-year performance period after achieving operational capability. If the odour specifications are not met over this two-year performance period, HRP will be obliged to upgrade the plant as required to meet the standards. HRP are therefore incentivized to design and build the plant so that it can be operated well below the performance standard.

Re-opening the contract to establish the odour performance limit at two odour units is therefore unnecessary to achieve the guiding principle (that there be no detectable odour by residents) and would also have significant impacts to both schedule and budget.

2. Report back to the Core Area Liquid Waste Management Committee on the advisability and cost of reducing operating Noise levels when measured at the McLoughlin Point property line to 55 Decibels.

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation to not explore a Change Order with Harbour Resource Partners (HRP).

The guiding principle for the design of the McLoughlin Point Wastewater Treatment Plant is that operating noise levels are within reasonable levels for all residents. The reference point is noise bylaws and agreements with the Township of Esquimalt and City of Victoria.

The contract specifies that:

- a) Noise enclosures are required for equipment which generates high levels of noise, such as air blowers and generators;
- b) Acoustic baffles will be installed on the intake and exhaust louvers;
- c) Acoustic insulation of walls, doors and roofs as necessary to meet noise control bylaws; and
- d) Noise levels at receptors must be in compliance with municipal bylaws.

The contract with HRP specifies that operational noise from the McLoughlin Point Wastewater Treatment Plant must not exceed 60 decibels at the plant's property line. Under normal operating conditions noise modelling shows that the predicted decibel levels in James Bay (the closest location to the plant site in the City of Victoria) and other surrounding areas in the City of

Victoria, will not exceed 35 decibels. This is 5 decibels below the most stringent limit in the City of Victoria noise bylaw.

The noise modelling was undertaken assuming a “worst case scenario” of 60 decibels everywhere along the McLoughlin Point Wastewater Treatment Plant site’s property line. However, actual noise levels from the treatment facility once operational are anticipated to be lower.

The scope of the contract with HRP includes the design, build and finance of the McLoughlin Point Wastewater Treatment Plant. The contract is structured such that third party debt capital is at risk until HRP can demonstrate that the plant has satisfactorily achieved operational capability, including compliance with contract noise specifications. Such performance will have to be demonstrated continuously over a 90 day acceptance period for HRP (and their lenders) to receive full payment. In determining whether to put their capital at risk, third party lenders satisfied themselves that HRP’s designs are capable of meeting the contract specifications.

Re-opening the contract to establish the operating noise limit at 55 decibels is therefore unnecessary to achieve reasonable levels of noise for all residents and would have significant impacts to both schedule and budget.

- 3. Continue and improve consultation with James Bay, Victoria West, Fairfield and Downtown residents on mitigation of construction and long-term impacts from conveyancing infrastructure, the McLoughlin Point waste-water treatment and the Clover Point Pump Station.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation outlined below, which is in agreement with the request.

The Project Team will continue to look for ways to build relationships and expand their communications tools in order to provide timely information about construction planning and to hear questions and concerns. As the Project moves into the construction phase, we expect the level of engagement will increase as the Project Team will have more information to share with potentially impacted communities. The Project Team’s communications will follow the linear nature of the construction of the Project, which starts in Esquimalt and James Bay, moves into Fairfield Gonzales in the fall of 2017 and to Saanich in 2018. For each phase of the Project, the Project Team will communicate with communities to provide information and hear questions and concerns. The Project Team will continue to use all the communication tools described in the Project’s Communications and Engagement plan, which include a 24/7 phone line, web updates, residential mail updates, email updates, construction bulletins, community liaison meetings, community information meetings, and where appropriate, door-to-door visits.

- 4. Closely monitor geotechnical issues along the Dallas Road waterfront and advise the Core Area Liquid Waste Management Committee of any issues that arise and solutions.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted

unanimously in favour of the staff recommendation outlined below, which is in agreement with the request.

In addition, and subsequent to the CALWMC's April 12th meeting, the City of Victoria passed a related resolution on May 11th as follows:

Put in place risk mitigation measures to protect the Dallas Road Bluffs during construction including but not limited to:

- a. Assembling an interdisciplinary team to study and address the protection of the bluffs.*
- b. As part of the detailed design of the conveyancing, include a plan for the preservation of the bluffs.*

And that the Project Board report out to the public at one of their regular community meetings, to the JBNA and to Victoria City Council on the measures outlined.

The following response captures the direction of the Project Board to resolution 4 from the CALWMC's April 12th meeting and elaborates on the Project Team's plans in order to address the related resolution from the City of Victoria's May 11th meeting.

Geotechnical investigations and monitoring will take place along Dallas Road with an enhanced focus on the shoreline and bluffs prior to, during and after the construction of the Clover Point Forcemain and related pipework. The geotechnical investigations will include a series of test holes drilled along the pipe alignment to establish existing geological conditions and to collect samples for laboratory testing and use in establishing geotechnical design parameters for the pipe and bluff stability analysis. The geotechnical monitoring will include the installation of instruments near the bluffs and along the pipe alignment. Recordings from these instruments will be used to monitor conditions during the construction and post construction phase of the project.

The design process for the conveyance system from Ogden Point to Clover Point (the Clover Point Forcemain) has begun. It includes the development of an indicative design and a final design. Stantec, as the owner's engineer, will undertake the indicative design. Another qualified engineering firm (which we will call the 'Second Engineering Firm') will review the indicative design and prepare the final design. Both firms will have input into the undertaking of, and access to the outcome of, geotechnical investigations and monitoring outlined above.

Specifically, the Project Team will competitively-procure the Second Engineering Firm to review the indicative design and prepare the final design. This firm will have expertise in the fields of geotechnical, terrain analysis, environmental and civil engineering. The firm will be provided with the indicative design and the results of the geotechnical investigations undertaken to-date, and will be responsible for reviewing that work as part of developing the final design. They will also be responsible for fulfilling the duties of Engineer of Record as defined by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). Professional members of the firm and their qualifications will be noted as part of their work.

As part of their scope of work, the Second Engineering Firm will prepare a plan to mitigate any impacts on the bluffs during construction. As noted, this plan will include post construction monitoring for 12 months following completion of construction.

Reports detailing the results of the geotechnical investigations and the indicative alignment will be complete in the fall of 2017. The Project Team will report on these to the public at one of their regular community information meetings, to the James Bay Neighbourhood Association and to Victoria City Council. Results will also be posted on the Project website.

5. Explore a Green Shores certification for the Clover Point Pump Station

The Project Board reviewed this request and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation outlined below, which is in agreement with the request.

The Project Team will review the Green Shores certification process and determine whether the certification might be appropriate for the Clover Point Pump Station, and identify any impacts to cost and schedule of pursuing the certification.

2.9.2 Integrated Resource Management Advisory Committee (IRMAC)

The Project Board received resolutions from IRMAC's April 12th Open meeting. The Project Board considered these resolutions at its May 2nd meeting. The IRMAC's resolutions are in italics and the Project Board's response, as discussed at its May 2nd meeting follow.

- 1. That the Integrated Resource Management Work Plan as amended be submitted to the Minister of Environment by May 31, 2017; and*
- 2. That this report [staff report entitled 'Advanced Integrated Resource Management – Next Steps'] be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.*

The Project Board received this report for information and noted that it is anticipated that biosolids will start to be produced by the Residuals Treatment Facility from the spring-summer of 2020 rather than from January 2021 as noted in the CRD staff report to the IRMAC entitled 'Advanced Integrated Resource Management – Next Steps'.

The Project Board also received a number of resolutions from the Integrated Resource Management Advisory Committee's (IRMAC) April 12th Closed meeting. The Project Board considered these resolutions at its May 2nd meeting. The IRMAC's resolutions and the Project Board's responses, as discussed at its May 2nd meeting, were sent to the IRMAC in a letter from Bob Lapham on behalf of the Project Board, dated May 5, 2017 and attached as Appendix C.



Appendix A: Summary of Project Expenses to April 30, 2017

CORE AREA LIQUID WASTE MANAGEMENT SUMMARY REPORT
MONTH ENDING APRIL 30, 2017
(in \$ millions)

3.798C - Core Area Wastewater Treatment Program	to 2013	2014	2015	2016	2017	Total
Program Expenses						
Wastewater Treatment - McLoughlin	9.71	0.43	0.48	(0.15)	3.12	13.6
Conveyancing	6.90	7.53	3.01	0.02	0.00	17.5
Residuals Treatment Facility	2.99	1.66	0.01	0.82	-	5.5
Common Costs*	4.96	3.16	0.24	(1.70)	1.60	8.3
Interim Financing	0.04	0.03	0.19	0.23	0.08	0.6
LWMP - Project Board	-	-	-	2.61	4.88	7.5
Total program expenditures	24.60	12.80	3.93	1.83	9.69	52.8

* Common costs include BCHydro and Third Party Commitments



Appendix B: Core Area Liquid Waste Management Summary Report

PROGRAM SUMMARY REPORT
SUMMARY OF PROJECT EXPENSES TO APRIL 30, 2017
(in \$ millions)

	to 2013	2014	2015	2016	2017	Total
WASTEWATER TREATMENT PLANT						
Marine Outfall - McLoughlin Pnt - CAWTP	210,592	4,843	-	-	-	215,435
Project Management & Commission	983	-	-	-	-	983
Victoria Harbour Crossing - CAWTP	467,794	5,377	102	(151,019)	24,635	497,908
Wastewater Treatment - McLoughlin Pnt	9,035,692	417,911	476,269	(151,019)	3,098,437	12,877,290
Subtotal Wastewater Treatment Plant	9,715,061	428,131	476,371	(151,019)	3,123,072	13,591,617
CONVEYANCING - PUMP STATIONS & PIPES						
Arbutus Rd Attenuation Tank	3,740,034	552,160	135,860	-	-	4,428,054
Clover Ogden FM	13,840	15,930	-	-	-	29,771
Clover Pt PS	318,411	86,020	142,857	-	-	547,288
Craigflower PS	2,616,936	6,805,124	2,684,505	15,976	350	12,122,890
Currie FM	4,245	588	-	-	-	4,832
Currie PS	4,245	-	-	-	-	4,245
Macaulay - McLoughlin FM	20,993	588	-	-	-	21,581
Macaulay Pt PS	141,761	50,790	50,000	-	-	242,551
Trent/ECL Twinning	35,487	14,506	-	-	-	49,993
Subtotal Conveyancing - Pump Stations & Pipes	6,895,951	7,525,706	3,013,222	15,976	350	17,451,205
RESIDUALS TREATMENT FACILITY						
Project Management & Commission	596	-	-	-	-	596
Resource Recovery Ctr	2,930,973	1,530,025	13,223	816,975	-	5,291,196
Sludge & Concentrate Conveyance	63,463	127,131	-	-	-	190,593
Subtotal Resource Recovery Centre	2,995,032	1,657,155	13,223	816,975	-	5,482,386
COMMON COSTS						
Commission Direct	374,120	144,694	89,199	31,821	-	639,834
Third Party Commitments	-	-	-	-	1,540,000	1,540,000
BC Hydro	-	-	-	-	55,020	55,020
Project Management	4,583,480	3,013,700	148,393	(1,726,466)	-	6,019,106
Subtotal Common Costs	4,957,600	3,158,394	237,592	(1,694,645)	1,595,020	8,253,960
INTERIM FINANCING						
	36,600	29,916	192,834	226,776	82,603	568,729
PROGRAM CONTINGENCY						
	-	-	-	-	-	-
LWMP - PROJECT BOARD						
Project Oversight (Project Board)	-	-	-	554,661	198,660	753,320
Communications	-	-	-	38,616	276,509	315,124
Feasibility and Costing Analysis	-	-	-	649,203	-	649,203
Business Case review	-	-	-	75,630	-	75,630
Partnerships BC	-	-	-	373,042	870,959	1,244,001
Project Management (Staff and Wages)	-	-	-	193,600	433,918	627,518
Miscellaneous and Legal	-	-	-	725,862	3,104,145	3,830,007
Subtotal LWMP - Project Board	-	-	-	2,610,613	4,884,191	7,494,804
TOTAL	24,600,244	12,799,303	3,933,242	1,824,676	9,685,236	52,842,701



Appendix C: May 5, 2017 Letter to IRMAC from Bob Lapham on behalf of the Project Board



Making a difference...together

Capital Regional District

625 Fisgard Street, PO Box 1000
Victoria, BC, Canada V8W 2S6

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May 5, 2017

File: 0220-20
Core Area Wastewater Treatment Project Board

Dear CRD Chair & Directors,

RE: Resolution from the Integrated Resource Management Advisory Committee

On behalf of the Core Area Wastewater Treatment Project Board ("**Project Board**"), I am writing to you regarding the following resolution from the Integrated Resource Management Advisory Committee's April 12, 2017 closed meeting (the "**Resolution**"):

That the IRM proposals be sent to the Project Board for their information and request:

1. that the Project Board review the IRM timelines and see how the IRM project can be aligned with what the Project Board is doing;
2. that the Project Board evaluate the proposals;
3. that the Project Board review elements of the applications with a view towards controlling the total costs on the region, maximizing possibilities for resource recovery and streamlining processes; and
4. that the Project Board consider up to 100% raw sewage and owned finance options

During its meeting on May 2, 2017, the Project Board considered the Resolution, and the Project Board's role in the IRM planning process being led by the CRD. The Project Board is unable to act on the Resolution because the requests are not within the scope of duties defined in the Project Board's terms of reference. Further background to the Project Board's response follows.

1. Funding Agreements

As you are aware, the Wastewater Treatment Project ("**the Project**") consists of three main elements:

- the McLoughlin Point Wastewater Treatment Plant,
- the Residuals Treatment Facility, and
- the Conveyance System.

The Project cost of \$765 million is being funded by the federal and provincial governments, and the CRD.

The Government of British Columbia will provide up to \$248 million towards the three components of the Project and P3 Canada will provide up to \$41 million towards the Residuals Treatment Facility. The funding by P3 Canada and the Government of British Columbia is intrinsically linked to the entire Project. The construction of the Residuals Treatment Facility cannot be extracted without placing the entire funding amounts from these funding partners at risk.

2. Regulatory Context

The Project must satisfy the regulatory requirements applicable to wastewater treatment. The funding agreements, as expected, require the Project to comply with all applicable laws as a condition of the funding.

The CRD is legally obliged to treat wastewater, and those legal obligations extend to the treatment byproducts, including biosolids. Federal and Provincial regulatory requirements apply to biosolids quality, the environmental implications, and the management of wastes. In British Columbia, the Organic Matter Recycling Regulation applies to the production, distribution, storage, sale, and use of biosolids and compost.

The inclusion of the Residuals Treatment Facility in the Project as part of the solution for treating the Core Area's wastewater satisfied the regulatory requirements, and therefore the funding partners. The processing of sewage sludge into Class A biosolids is part of the approved Core Area Liquid Waste Management Plan ("CALWMP") Amendment 11. In addition, the Minister of Environment's approval of the CALWMP Amendment 11 is conditional upon the CRD submitting a definitive plan for the beneficial reuse of biosolids by June 30, 2019 and to ensure the definitive plan for beneficial reuse of biosolids is supported by an assessment of the full spectrum of beneficial uses and integrated resource management options available for the Class A biosolids that will be produced.

3. Operational Context

Biosolids comprise only a small proportion of the total combined biosolids, organics and municipal solid waste streams that must be integrated to create an effective IRM plan. As a result, the potential for IRM in the Core Area will be predominantly driven by the solid waste streams. Thus, IRM planning properly resides within the Solids Waste Management Plan rather than as a separate aspect of wastewater treatment within the Liquid Waste Management Plan.

The Residuals Treatment Facility and the chosen site of Hartland landfill optimises the integration of biosolids with the current and future solid waste program. Hartland landfill receives about 140,000 tonnes of municipal solid waste per year and offers operational synergies and IRM opportunities with biosolids processing.

4. Residuals Treatment Facility

Given the above, there is no conflict between the IRM planning process and the construction and operation of the Residuals Treatment Facility. The Project Board, as part of the liquid waste management planning, has ensured that the Project provides the CRD the flexibility and the ability to accommodate an IRM planning process either now or in the future. As discussed in greater detail in the Core Area Wastewater Treatment Program Business Case dated September 7, 2016, that was approved by the CRD Board on September 14, 2016, the Project Board considered a wide spectrum of biosolids treatment technologies in its analysis. In recommending the production of class A biosolids at Hartland landfill, the Business Case recognised that the biggest opportunity for IRM at the CRD exists with the potential integration of the various waste streams that may be available at the Hartland Landfill.

Furthermore, the Project Board have structured the Residuals Treatment Facility contract to ensure that up to 50% of raw residuals produced at the McLoughlin Point Wastewater Treatment Plant can bypass the Residuals Treatment Facility. As noted in the April 12, 2017 report entitled 'Advanced Integrated Resource Management – Next Steps', that the Project Board received for information, this contractual and operating flexibility supports the viability of IRM solutions that rely upon the incorporation of both raw residuals and class A biosolids.

The Project Board appreciates the work of the IRM Committee in leading the planning and development of a comprehensive IRM plan. The Project Board is maintaining the alignment by ensuring that, through the CRD Chief Administrative Officer, the CRD IRM Advisory Committee is aware of the Project's activities, specifically as they relate to the production of biosolids.

I trust that the above information provides useful background and explains the Project Board's complementary functions.

Yours truly,



Robert (Bob) Lapham, MCIP, RPP
Chief Administrative Officer

cc: Core Area Wastewater Treatment Project Board
Dave Clancy, Project Director, Core Area Wastewater Treatment Project

Subject: FW: email and request to forward to CALWMC
Attachments: LT to Chair Helps - May 8 2017 (002).pdf; McLoughlin Point Traffic Management Plan 2017 05 16.pdf

From: Jane Bird [<mailto:BirdJa@bennettjones.com>]
Sent: Thursday, May 25, 2017 10:35 AM
To: Robert Lapham <rlapham@crd.bc.ca>; Brent Reems <breems@crd.bc.ca>
Cc: Denise Dionne <ddionne@crd.bc.ca>; Kristin Quayle <kquayle@crd.bc.ca>; Andy Orr <aorr@crd.bc.ca>; Don Fairbairn (don@dcfconsulting.ca) <don@dcfconsulting.ca>; Dave Clancy <dclancy@crd.bc.ca>; Elizabeth Scott <escott@crd.bc.ca>; Marie Blachuras <BlachurasM@bennettjones.com>; Anna Wright <annawright@kirkandco.ca>
Subject: email and request to forward to CALWMC

At its May 10, 2017 meeting, the Core Area Liquid Waste Management Committee (CALWMC) requested that the Core Area Wastewater Treatment Project Board (the Project Board) provide a response to questions from the CALWMC, in advance of the CALWMC's next meeting on June 14, 2017. Following are the Project Board's answers to the questions. The answers lend themselves to an email rather than a briefing note. We have asked Brent Reems to forward them to the Committee.

In addition to these questions, there are motions with formal requests to the Project Board which are outstanding. We have created a new section in our regular report to CALWMC entitled "*Requests from the CRD or CRD Committee to the Project Board*". The response to any formal requests from the Committee will be included in the monthly report. Questions that are outstanding will be addressed in the report for the June CALWMC meeting.

The questions from the CALWMC meeting on May 10 and the Project Board's responses are as follows:

1. *The Project Board report made note of an Esquimalt Liaison Committee – there should also be a similar liaison committee established in Saanich. When is that going to happen, since both the pipeline and the facility will be built in Saanich?*

The Esquimalt Liaison Committee was established as part of the Community Impact Mitigation and Operating Agreement with Esquimalt, to provide a forum for the discussion of issues related to the construction and operation of the Wastewater Treatment Plant.

Per the Wastewater Treatment Project's Communications and Engagement Plan, the Project Team is currently establishing a process for communications and engagement regarding construction of those components of the Wastewater Treatment Project (the Project) that will be located in the District of Saanich – being

the Residuals Treatment Facility at Hartland Landfill, the Residuals Treatment Pipelines and Pump Stations and the Arbutus Attenuation Tank. The design for these components of the Project is not as advanced as for the Wastewater Treatment Facility, and the construction of these components is not scheduled to start until 2018 or later. However, the Project Team have held meetings with staff at the District of Saanich and have established a technical working group to coordinate on matters as planning progresses.

The Project Team have also discussed with Saanich staff the establishment of a Liaison Committee, as has been formed in Esquimalt. It is anticipated that a Saanich Liaison Committee would be made up of members of Saanich community associations, and/or the Saanich Community Association Network. The Project Team would update the Saanich Liaison Committee as the Project moves forward and would request input into the best ways to connect with the Saanich community. The Project Team anticipates establishing a Saanich Liaison Committee by the end of this year, when it will have more information to share with Saanich community members regarding the Project components that are to be constructed in Saanich.

2. *Why was no one from the Project Board in attendance at the meeting, or in their absence, Project staff?*

Unfortunately both the Chair and Vice-Chair of the Project Board were unable to attend due to prior scheduling conflicts. In lieu of attendance Chair Bird provided a letter to Chair Helps on May 8th, 2017 (letter attached) apologizing in advance for her absence, providing context for the Wastewater Treatment Project's report on the CALWMC's agenda and confirming that both the Chair and the Vice-Chair would attend the CALWMC's June 14th meeting.

Following the CRD Board's approval of the business case attached to the Project Board's final report with respect to its recommendation for the Project, the Project Board appointed a Project Director to lead a Project Team to complete the planning and undertake the procurement and construction of the Project. However, the Project Board Chair and Vice-Chair have continued to take responsibility for attending the CALWMC meetings in order to present reports and answer questions as, in accordance with the Project Board Terms of Reference, the Board is responsible for overall planning and execution of the Project.

3. *Request an appearance by Mr. Clancy to the CALWMC for introduction.*

Chair Bird and Vice-Chair Fairbairn plan to attend the June 14th, 2017 CALWMC meeting and Mr. Clancy will also attend for an introduction.

4. *In Appendix C (Page 4/4) it makes reference to 30 trucks per day over 3 month period. Is this the exact same truck route, or will this be different routes being used?*

The reference to 30 trucks per day relates to the hauling of excavated material from McLoughlin Point during site preparation, which is anticipated to be from May 2017 to August 2017. The truck routes are laid out in the Wastewater Treatment Plant's Draft Traffic Management Plan which is attached as Appendix B. The Draft Traffic Management Plan shows that the 30 truck trips to the McLoughlin Point site during site preparation will be on the same route into and out of the McLoughlin Point site. Outside the geographical limits of the Draft Traffic Management Plan designated truck routes will be used.

The Traffic Management Plan was unanimously approved by the Township of Esquimalt Council at its meeting of May 23rd, 2017. The Plan has been discussed with various stakeholder groups including the Esquimalt Liaison Committee and the Vic West Community Association. In addition to the Plan for McLoughlin Point / Esquimalt, there are separate strategies for the routes that go through Victoria.

5. *Request an item by item response to the questions from last month regarding IRM, over and above what was provided in the letter.*

As noted, the Project Board Chair and the Vice-Chair will be in attendance at the CALWMC's June 14, 2017 meeting and will be able to speak to any questions regarding the relationship between the mandate of the Project Board and the IRM process, including the content of the letter dated May 5 2017 (Re: Resolution from the Integrated Resource Management Advisory Committee) which Robert Lapham sent to the CRD Chair and Directors at the request of and *on behalf of the Project Board*.

6. *Ask Project Board to report out on the same memo/letter regarding IRM: why 50% and not 100% to be considered, and address the letter at the next meeting.*

As noted, the Project Board Chair and the Vice-Chair will be in attendance at the CALWMC's June 14, 2017 meeting and will be able to speak to the letter dated May 5, 2017 (Re: Resolution from the Integrated Resource Management Advisory Committee) to the CRD Chair and Directors.

7. *Provide confirmation that the Project Board is not simply spending to the Project budget - that they will work to realize cost savings where possible.*

On May 25, 2016 the Regional Board of the CRD adopted by resolution the Core Area Wastewater Treatment Project Board Terms of Reference for the purposes of establishing principles governing the Core Area Wastewater Treatment Project.

The Project Board's Terms of Reference defined four goals:

- Meet or exceed federal regulations for secondary treatment by December 31, 2020.
- Minimize costs to residents and businesses (lifecycle costs) and provide value for money.
- Optimize opportunities for resource recovery and greenhouse gas reduction.
- Deliver a solution that adds value to the surrounding community and enhances the livability of neighborhoods.

The Project Board considered these goals in developing the Project described in its final report (September 7, 2016) that accompanied its recommendations for the Project. That report described the scope and schedule, which in turn drives cost: included in the business case at \$765m. The scope and schedule deadlines will not change materially; every effort will be made to deliver within \$765m.

While the Project team will seek to realize cost savings where possible, it will do so in the overall context of the Project. Any cost saving will be considered in the context of any consequential increase in the risk of not meeting the other goals.

The key performance indicators included in the Project Charter, reproduced below, are designed to ensure that the Project objectives are met.


Key Performance Indicators

Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency (TRIF) of no more than 1*.
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction.
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.
Schedule	Deliver the Project by December 31, 2020.
Cost	Deliver the Project within the Control Budget (\$765 million).

- A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work.

Attachment(s): 2

[Letter from Chair Bird to Chair Helps, May 8, 2017](#)
[Traffic Management Plan for Wastewater Treatment Plant](#)

 Jane Bird
Senior Business Advisor, Bennett Jones LLP

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Making a difference...together

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www.crd.bc.ca

Via email

May 8, 2017

Core Area Liquid Waste Management Committee
625 Fisgard Street
Victoria, BC V8W 1R7

Attention: Chair Helps

Dear Chair Helps:

RE: Meeting of the CALWMC on May 10

I write to advise that both the Chair and Vice Chair of the Core Area Wastewater Treatment Project are out of town this week, and will not be able to attend the CALWMC on Wednesday, May 10. Please accept our apologies; the scheduling conflict was unavoidable.

The Committee will have received the following material:

1. A staff report that addresses the monthly report for April 2017. Of note is the fact that this report is very short because the Project Team is in the process of aligning the financial reporting period with the activity reporting period; therefore this report just bridges to the full report for April which will include activities and financial results for April. The April report will be completed in May and be included in the June meeting package.
2. A summary of the communications activities in April, together with copies of the following Project materials:
 - a. Project Update #1
 - b. Project Update #2, which includes a summarized list of the questions/themes that have arisen at various community meetings
 - c. Community Information Meeting boards
 - d. Frequently Asked Questions; the list is on the Project Website
 - e. Various Fact Sheets

The first meeting of the Esquimalt Liaison Committee occurred on May 3. Also, a meeting has been scheduled with members of the Fairfield Gonzales Community Association Land Use Committee on May 18. We have or are in the process of forming technical working groups with staff at the City of Victoria and the District of Saanich.

Finally, all of the requests to the Project Board from the CALWMC at its meeting of April 12, and those received from member municipalities since that time were discussed by the Project Board at its meeting on May 2. Formal written responses are under way and will be provided to the Committee shortly.

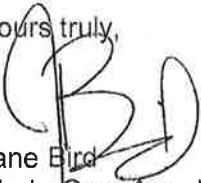
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As you know, the Project Team's focus at this point is the beginning of construction of the Wastewater Treatment Plant and the undersea pipe from Ogden Point to McLaughlin Point. Design work for the conveyance portion of the project, in particular from Ogden Point to Clover Point is just beginning, as is documentation for the procurement for the Clover and Macaulay Point pump stations. Finally, regarding the Residuals Treatment Facility, you will have received a note from the CRD CAO including the Information Bulletin noting the issuance of the Request For Proposals.

Again, please accept our apologies. The Chair and Vice Chair will be in attendance at the June Committee meeting.

Yours truly,

A handwritten signature in black ink, appearing to read 'Jane Bird', written over a vertical line.

Jane Bird
Chair, Core Area Wastewater Treatment Project Board

cc: Ted Robbins, Acting CAO
Don Fairbairn, Vice Chair, Project Board
Brent Reems, Corporate Officer



McLoughlin Point Wastewater Treatment Plant

Traffic Management Plan



Quality Information

Prepared by
J. Klarenbach

Checked by
J. Noble

Approved by
J. Klarenbach

Revision History

Revision	Revision Date	Details	Name	Position
1	April 26, 2017	Submission	J. Klarenbach	DBM
2	May 12, 2017	Submission	J. Klarenbach	DBM
3	May 16, 2017	Submission	J. Klarenbach	DBM

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1.0 INTRODUCTION

Harbour Resource Partners (HRP), which is a joint venture between AECOM Canada Ltd and Graham Infrastructure LP, has been contracted to design and build a new 108 ML/day wastewater treatment plant (WWTP) on McLoughlin Point. The construction of the WWTP will increase traffic within the surrounding community as a result of the construction activities. The purpose of the Traffic Management Plan is to:

- Consider the impact of construction on automotive and pedestrian traffic
- Identify designated traffic routing depending on the type and purpose
- Identify roadways that are not permitted for WWTP traffic
- Retain safety for all pedestrians and automotive traffic operating in surrounding area
- Identify the hours of work for WWTP truck traffic
- Control excessive noise and dust along the traffic route(s)
- Layout road detour for the off-site utility installation along Peters St.

2.0 TRAFFIC SEGREGATION & ROUTING

Construction traffic is categorized and segregated into specific routes to and from Esquimalt Road in order to manage the impact on residents living in the local area and provide consistency in which traffic will flow to and from the project:

- Truck Traffic
- Daily Workforce Traffic
- DND Laydown to Plant site

For illustration purposes Esquimalt Road is utilized as the boundary to traffic routing. See Appendix H for truck routes connecting McLoughlin Point with Swartz Bay and Rock Bay staging laydown for traffic outside of the Esquimalt Road.

In consideration of each route where possible we have evaluated multiple alternatives to arrive at our recommended traffic routing. These recommendations are described below and included in the Appendix for reference. Considerable attention has been made to areas such as Ecole Macaulay Elementary School, which are avoided to a greater extent to manage the impact in areas with increased pedestrian traffic. We remain committed to work with the Liaison Committee to incorporate reasonable changes timely to accommodate community feedback, special events and/or other construction activity in the area.

As communication and to maintain adherence to the designated traffic routes, HRP will be incorporating the maps provided in Appendix A as part of the commercial arrangement with each vendor prior to deliveries. (Eg: maps will be incorporated within Purchase Orders/Agreements.)

Appendix A – outlines the separate traffic routing as follows:

- Truck Traffic Route illustrated in red is the heavy truck traffic such as: concrete trucks, over size loads, rebar deliveries, gravel trucks, equipment and material deliveries on flat-bed trucks, cube vans, light vehicles, etc
- Daily Workforce Traffic illustrated in blue is the workforce traffic that is required for employees to support the construction activities such as: light vehicles, small busses/shuttles, etc

- DND Laydown to Plant Site illustrated in green is the truck and light vehicle traffic that will be travelling to and from the DND Laydown and the plant construction site. This traffic will include: over-size loads, cube vans, equipment and material deliveries, light vehicles, workforce shuttle and gravel trucks, etc.

2.1 Truck Traffic route

The truck traffic route was reviewed and evaluated utilizing three (3) alternate routes: namely Lampson, Macaulay and Head St. Criteria for evaluating each traffic route considers the risk potential, public interaction and disruption to local residents.

The truck traffic route is intended to be utilized to facilitate the material and equipment deliveries to and from the plant site. This traffic will include but not be limited to: concrete delivery trucks, tractor trailer units hauling earthworks, process equipment deliveries and general material deliveries, etc.

Appendix B contains the evaluation criteria and selection of the routing deemed the most appropriate for the truck traffic traveling from Esquimalt Road to the project site.

The selected routing of Head Street has been deemed to have the least risk with respect to public safety.

Appendix H contains the proposed routes beyond Esquimalt Road that will be utilized by truck traffic.

2.2 Workforce Traffic

Workforce traffic route was evaluated with three (3) alternatives, namely: Lampson, Fraser, and Head Street(s). Similar to the truck traffic evaluation the workforce traffic routes have been evaluated on the same criteria to determine a selected route that has the least risk to public safety. Appendix C illustrates the proposed routes and evaluation criteria. While workforce traffic enters the school zone(s) on a daily basis, this traffic is planned to occur well before and after school has commenced and concluded to align with the daily construction work hours. Furthermore, workforce traffic does not utilize the same route as transport deliveries to avoid a compounding frequency of travel over a specific route in effort to reduce additional impact on residents along the proposed routing.

The Ecole Macaulay Elementary PAC has recommended the use of Fraser Street for the workforce traffic at the end of shift. This has been considered based on the evaluation of Fraser Street and the additional risk, we determined this route to not be in the best interest of the residents and motorists. However, in consultation with the Liaison Committee we are willing to consider the alternate route of Fraser Street as noted by the PAC for use during the school calendar year if this is deemed beneficial by all stakeholders.

The workforce traffic route is intended to handle the craft workforce to/and from site. We have identified a parking area within the DND laydown area as a parking lot for adequate parking space due to the small worksite available at McLoughlin Point. Upon parking in the lot, transportation will be utilized to transfer workers to/from the plant site to reduce vehicular traffic on DND Workpoint.

2.3 Detour

During construction of the underground utility installation along Victoria View Road, Patricia Way and Peters St, up to the intersection with Lyall Street. The truck traffic route may not be useable due to the construction along Peters Street and an alternate detour (Appendix D) will be required short term for the truck traffic. The utility installation work along Peters Street is estimated for a four (4) week duration at which time the detour would be in place.

Detour signage will be installed at the appropriate intersections to identify the traffic route change. A risk identified during the detour timeframe is the intersection at Lyall and Macaulay as this is adjacent to Ecole Macaulay Elementary School. During school hours and the time when the detour is operational, a crossing guard will maintain this intersection to assist pedestrians.

3.0 SIGNAGE

Adequate signage outlining suitable traffic routes will be key to maintaining control and adherence to the traffic management plan. HRP will work in conjunction with Staff for the exact placement location of route signage to ensure adequate implementation. These signs will clearly delineate the Truck Traffic Route and Work Force Traffic Route for vendors and employees. The signage is proposed to begin at Esquimalt Road and the example locations can be found in Appendix E. Signage is planned to be 18in x 18in (45cm x 45cm), well within the 1m x 1m limit outlined in Bylaw 2252. Examples of the signage can be found in Appendix F.

Electronic sign boards (ESB) can be used to communicate increased Truck Traffic volumes to the public. Construction activities such as significant concrete pours will be communicated through the electronic message board located on Esquimalt Road in advance. For example: "Large Concrete Pour (3/10)". Please see Appendix E for the example location of the ESB and Appendix F for examples of the signs. Actual locations for the signs will be in mutual agreement with Staff.

Radar speed sign displaying the speed of the vehicles will be used on the work force traffic and truck traffic route as traffic calming and also to enforce posted speed limits. Please see Appendix E for an example of the proposed locations.

Traffic routes and periods with increased traffic will be communicated to the public through the CRD's website and a phone number and email address will be available for community inquiries.

4.0 STAGING AREA

Rock Bay staging and laydown area has been made available for intermediate staging of delivery loads and material/equipment laydown as required for use. This area is intended to be utilized for the duration of the construction. Specific to the traffic management, the staging area will be deployed for managing the frequency of deliveries, where required, to avoid trucks parking on roadways waiting to make deliveries of materials or equipment. During these times the staged trucks at Rock Bay would be released periodically when the Plant Site operations can adequately receive and unload such trucks in a timely manner.

5.0 HOURS OF WORK

Weekday Truck Traffic Hours will range between: 7:00am to 7:00pm

Truck Traffic will remain in compliance with Esquimalt's noise bylaw 2826 section 33(2).

Weekday Hours for Workforce Traffic will range between: 6:30am to 7:00pm

Standard Workforce Schedule is: 6:30am and 5:30pm

Construction work will take place Monday through Friday at the given times above. Occasionally, there will be a small work crew of approximately 20 persons on the weekends performing schedule sensitive work tasks.

6.0 NOISE & DUST MITIGATION

Excessive noise as a result of truck traffic utilizing engine retarders, excessive braking or excessive acceleration (except in an emergency situation) will not be tolerated by HRP. A Logistics Coordinator will be assigned to monitor the truck traffic and control the adherence with the vendors that are hired for deliveries. Should any vendor become in non-compliance with the Township of Esquimalt and DND bylaw(s) or HRP's expectations, the specific truck driver will not be permitted site access in the future until such time as reasonable, demonstrable actions have been implemented to prevent a reoccurrence.

Depending on weather conditions, truck traffic may create dust from time to time. To control the dust along the Truck Traffic route, HRP will use either a method of watering to roadway or sweeping to control and mitigate the dust nuisance. Again, HRP's Logistics Coordinator will monitor and control the dust mitigation activities. Further to the above, sweeping of the roadway will be performed to return the road to an agreed to condition. During bulk earthwork hauling of high frequency, sweeping of the Truck Traffic route to Esquimalt Road will be performed on a weekly basis and then as agreed otherwise.

If unforeseen materials become accidentally spilled on the public roadways during the transportation of earthworks from the plant site. HRP will immediately clean up upon identification any spoil material and restore the roadway to pre-spill condition.

7.0 RESTRICTIONS

Further mitigation to avoid public impact, HRP has determined specific streets within the Township of Esquimalt and Work Point where no WWTP related Truck Traffic is permitted with the exception to emergency situations related to the WWTP construction. The details of these exact streets are shown in Appendix G.

8.0 REPORTING

HRP will continually monitor the WWTP truck traffic and report on a monthly basis the quantity of truckloads delivered to and/or exported from the Plant Site. The report shall categorize the loads into construction materials, earthworks, equipment and temporary services, where possible.

Questions pertaining to the WWTP construction traffic can be directed to:

CRD WWTP Call Line: 1-844-815-6132

Questions received at this number will be responded to by HRP or CRD depending on the question or concern presented.

9.0 RISK IDENTIFICATION

In development of the traffic management plan. Specific risks have been identified as "sensitivities" due to the nature of the proposed route(s) and local community interaction. Mitigation measures have been noted to address each specific sensitivity to incorporate into the global traffic management for the project:

Sensitivity

Pedestrian interaction surrounding Ecole Macaulay Elementary School

Mitigation(s)

Dedicated truck routing has been proposed intentionally to avoid the direct interaction with the school zone(s) and specifically during school hours. Signage for delivery truck routes will clearly display the proper traffic pattern to avoid the school zone and playground.

Workforce traffic is proposed on Lampson Street. The workforce hours accommodate the school zone hours as the workers will start work before school and end work well after school hours have concluded. An electronic message sign visually demonstrating the speed of each vehicle, installed to create more awareness and attention for drivers to use utmost caution at all times. Please see Appendix F for the locations of the speed sign.

In consultation with the Ecole Macaulay PAC, HRP will look to supplement the PAC's efforts with an additional two crossing guards to promote the pedestrian traffic safety in the area for the 2018 & 2019 school years.

Sensitivity

Intersection at Lyall and Head Street is not perpendicular

Mitigation(s)

Temporary construction signage to outline trucks turning during heavy traffic such as bulk earthmoving activities or significant concrete pours to be installed on both sides of the intersection to enhance awareness for all motorists.

Proposed to utilize this intersection to reduce residential impact along Gore St. and an awkward intersection with potential blind-spots

Sensitivity

Residential disruption along traffic routes

Mitigation(s)

Clearly defined and communicated traffic routes

Transport loads between 7:00am and 7:00pm reducing noise impact

Concrete delivery trucks may be outside the above noted hours; however, timely notification to be provided to the residents along the affected routes

Sequenced delivery, reduce convoy effect with transport loads back to back. Use of Rock Bay staging area where applicable

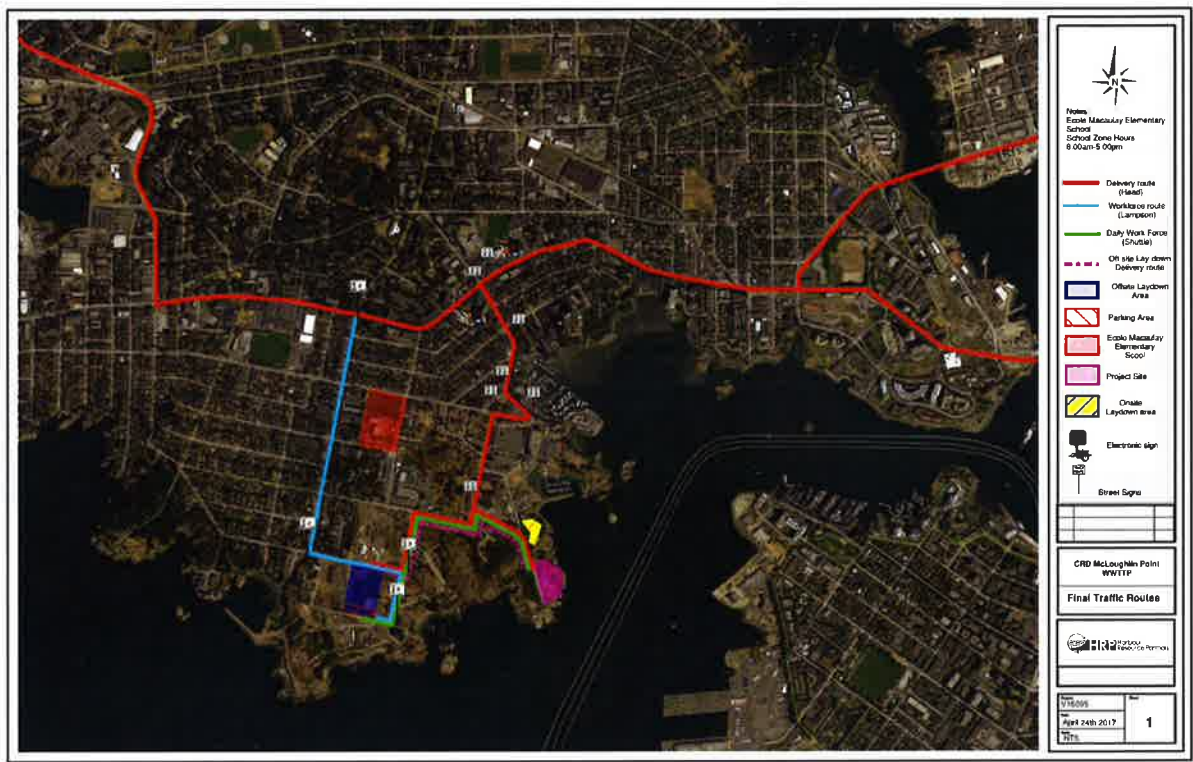
Sensitivity

Deliveries of materials and equipment to site

Mitigation(s)

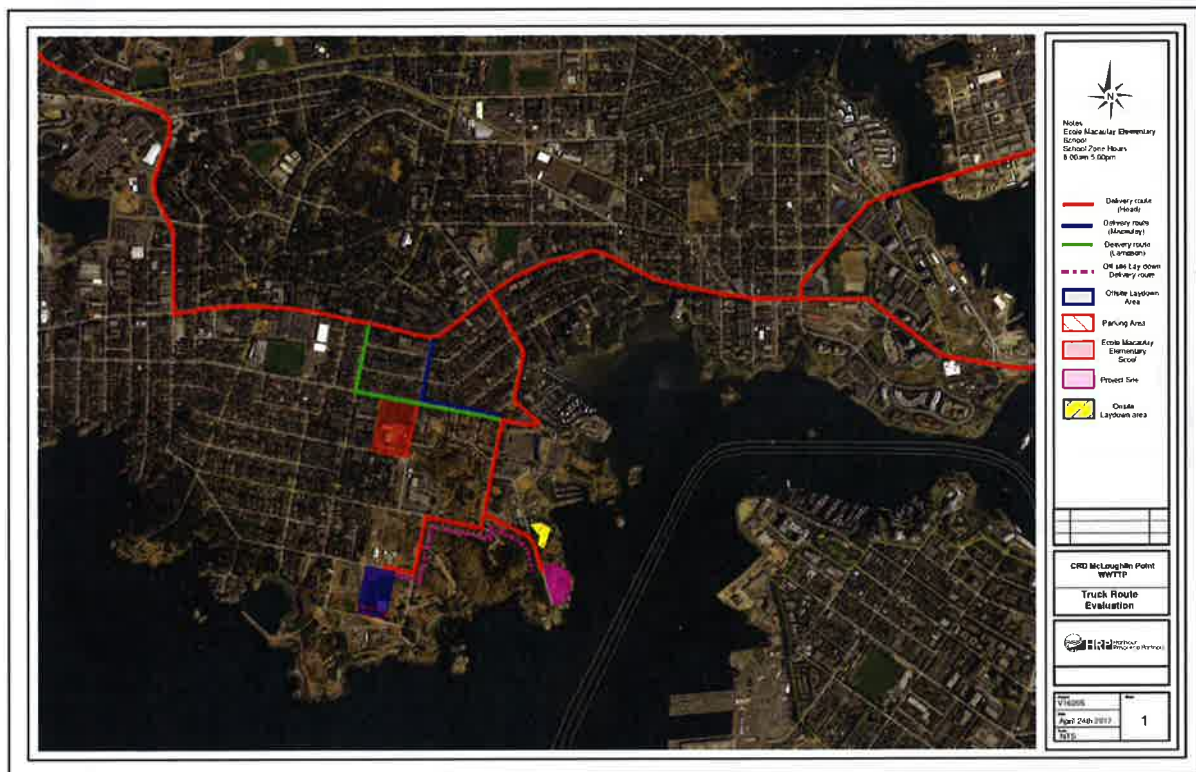
Deliveries will be sequenced and coordinated to avoid backups or excessive traffic on the roads leading to the plant. Deliveries will be scheduled during specific time periods and/or held at the Rock Bay site.

APPENDIX A – PROPOSED TRAFFIC ROUTES



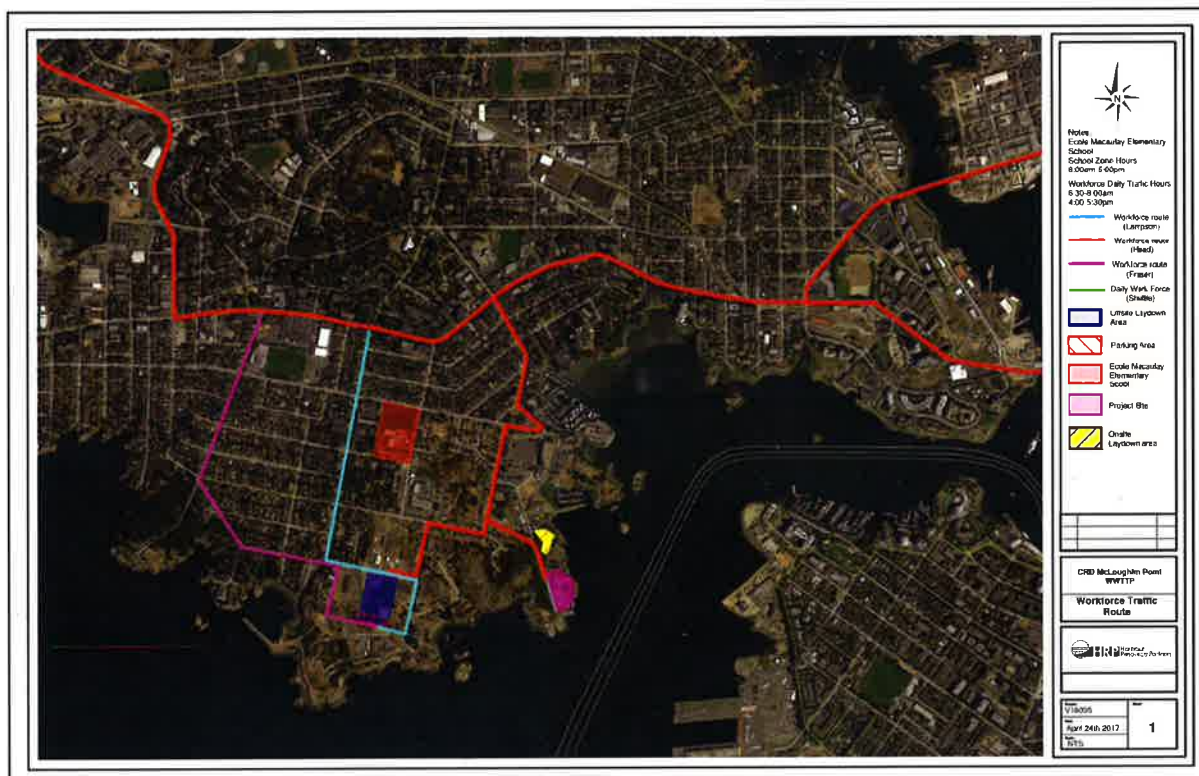
APPENDIX B – TRUCK TRAFFIC ROUTE EVALUATION

No Criteria		Comment	Score Sheet	Head St	Lampson St	Macaulay St
1	Controlled Main Intersection	Esquimalt Road provides left hand turning lane and traffic lights at the intersection of Head and Lampson	Turning Lanes and Traffic Lights (controlled) on main intersections	●	●	●
2	Street Parking	Street parking of vehicles is more prominent on Lampson and Macaulay in comparison to Head. Street parking affects the width of roadway	Street parking whereby residents or others are parked on the side of the road affecting the overall width of travel surface	●	●	●
3	Residential Driveways	Head St: 34, Lampson 54, Macaulay: 34	Do any of the routes interact with a large amount of residential driveways where	●	●	●
4	Pedestrian Interaction	Head St: 6, Lampson 8, Macaulay: 6	Pedestrian crosswalks entered along each route	●	●	●
5	Travel Time		Travel time per route	●	●	●
6	School Zone Interaction	Head St. has no school zone interaction, Lampson St enters the school zone and Macaulay has left turn at the school zone	Do the proposed route enter a school zone?	●	●	●
7	Road Condition		Width, Asphalt condition, smoothness	●	●	●
8	Final Evaluation			●	●	●

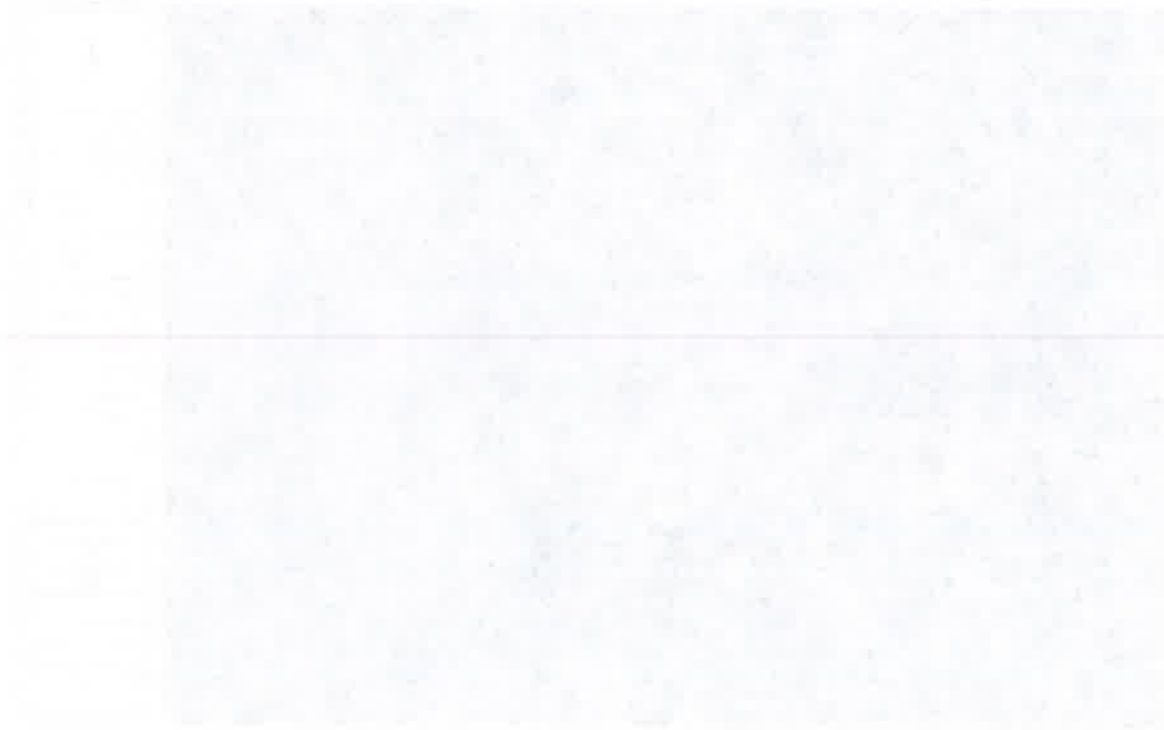


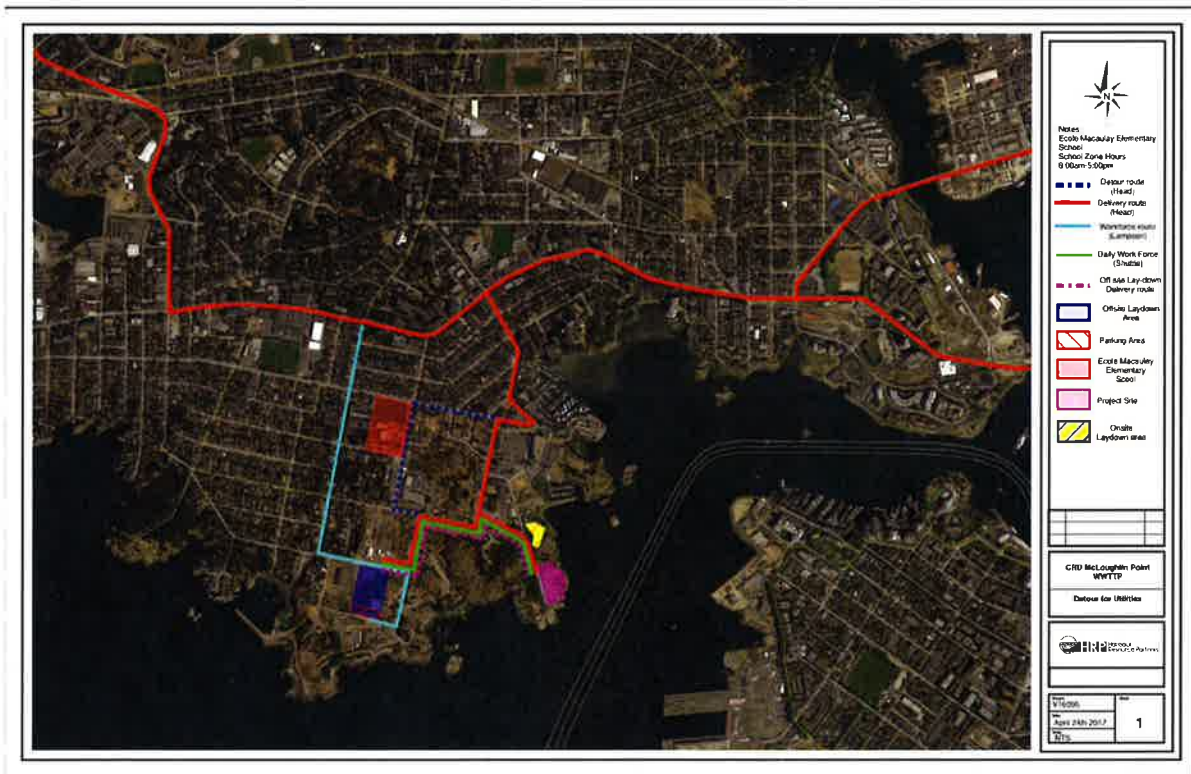
APPENDIX C – WORKFORCE TRAFFIC ROUTE EVALUATION

No Criteria		Comment	Score Sheet	Head St	Lampson St	Fraser St
1	Controlled Main Intersection	Esquimalt Road provides left hand turning lane and traffic lights at the intersection of Head and Lampson. No traffic lights at Fraser	Turning Lanes and Traffic Lights (controlled) on main intersections	●	●	●
2	Street Parking	Street parking of vehicles is more prominent on Lampson and Fraser in comparison to Head. Street parking affects the width of roadway	Street parking whereby residents or others are parked on the side of the road affecting the overall width of travel surface	●	●	●
3	Residential Driveways	Head St: 47, Lampson 47, Fraser: 75	Do any of the routes interact with a large amount of residential driveways where	●	●	●
4	Pedestrian Interaction	Head St: 7, Lampson 4, Fraser: 5	Pedestrian crosswalks entered along each route	●	●	●
5	Travel Time		Travel time per route	●	●	●
6	School Zone Interaction	Head St. has no school zone interaction, Lampson St enters the school zone and Fraser passes community Rec Centre	Do the proposed route enter a school zone?	●	●	●
7	Road Condition	All roads are in similar condition. Fraser St has a higher residential concentration and narrower streets. Head St is utilized as a truck route so recommend we reduce traffic on this route	Width, Asphalt condition, smoothness	●	●	●
8	Final Evaluation			●	●	●



APPENDIX D – DETOUR FOR UTILITIES

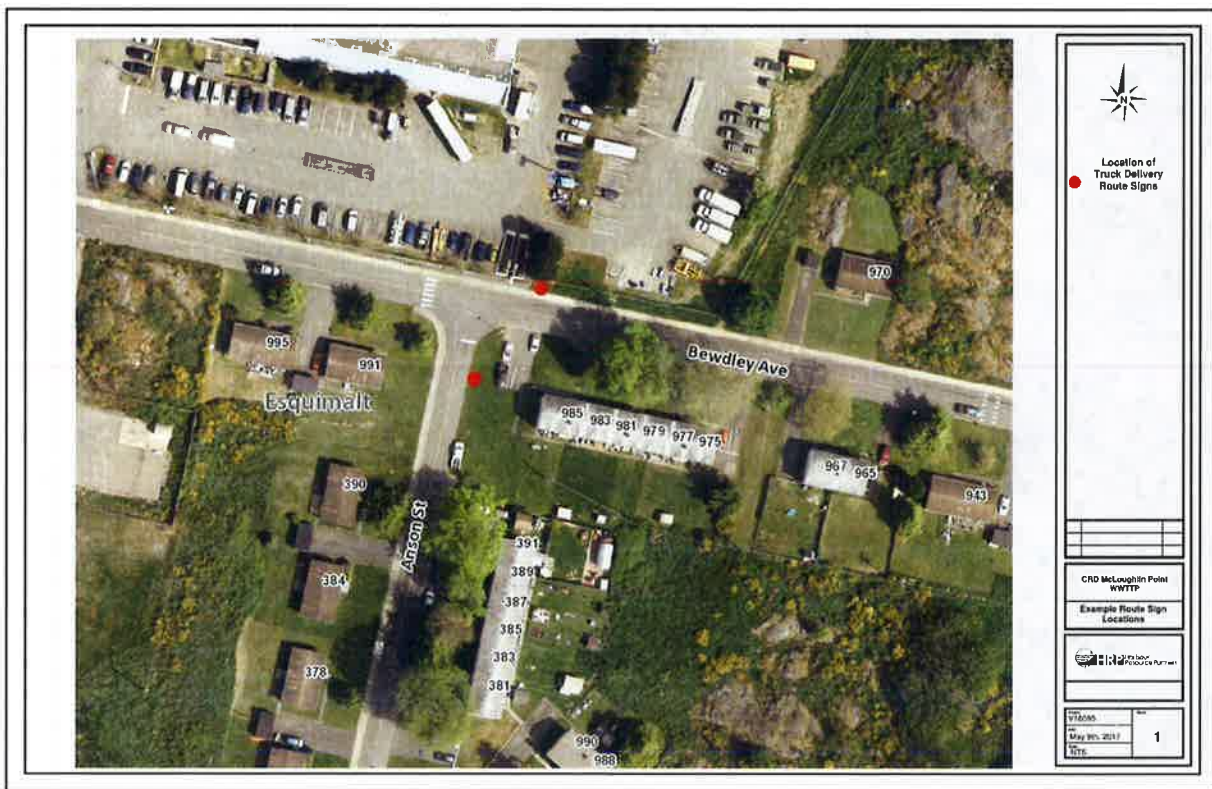




APPENDIX E – SIGNAGE PLACEMENT

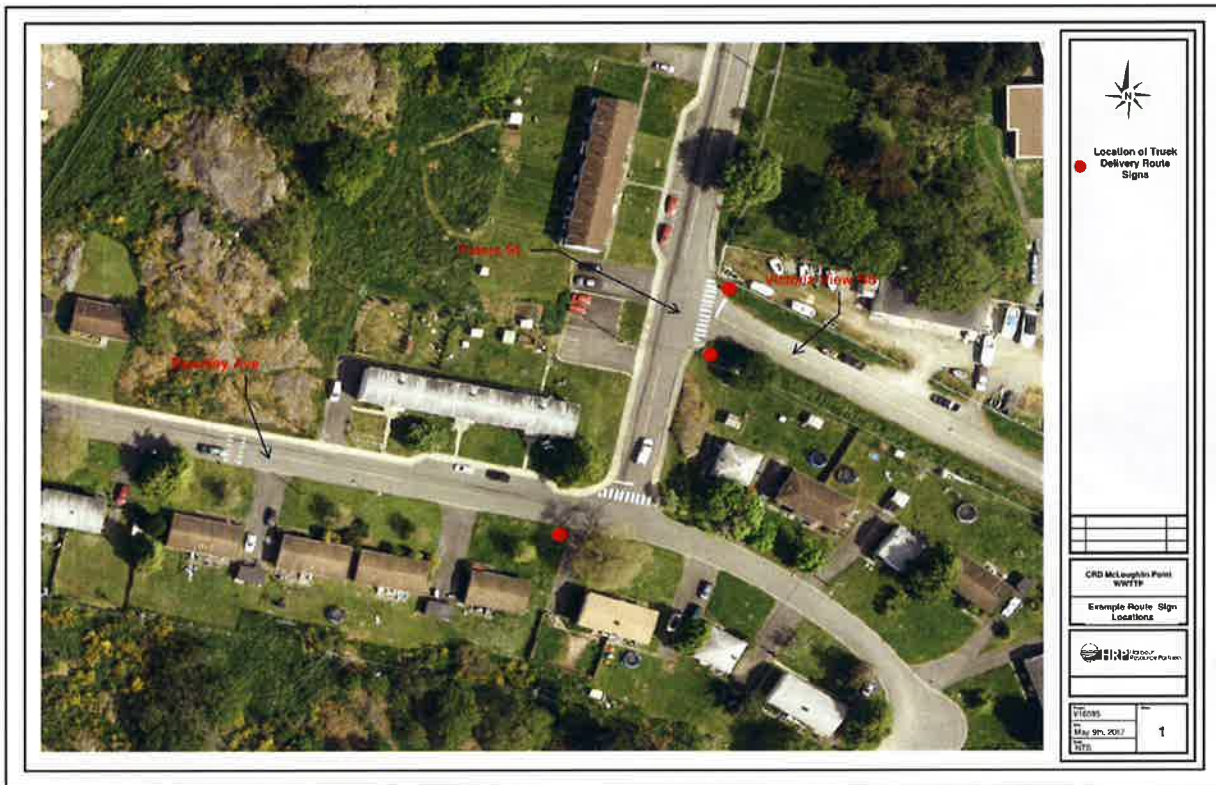






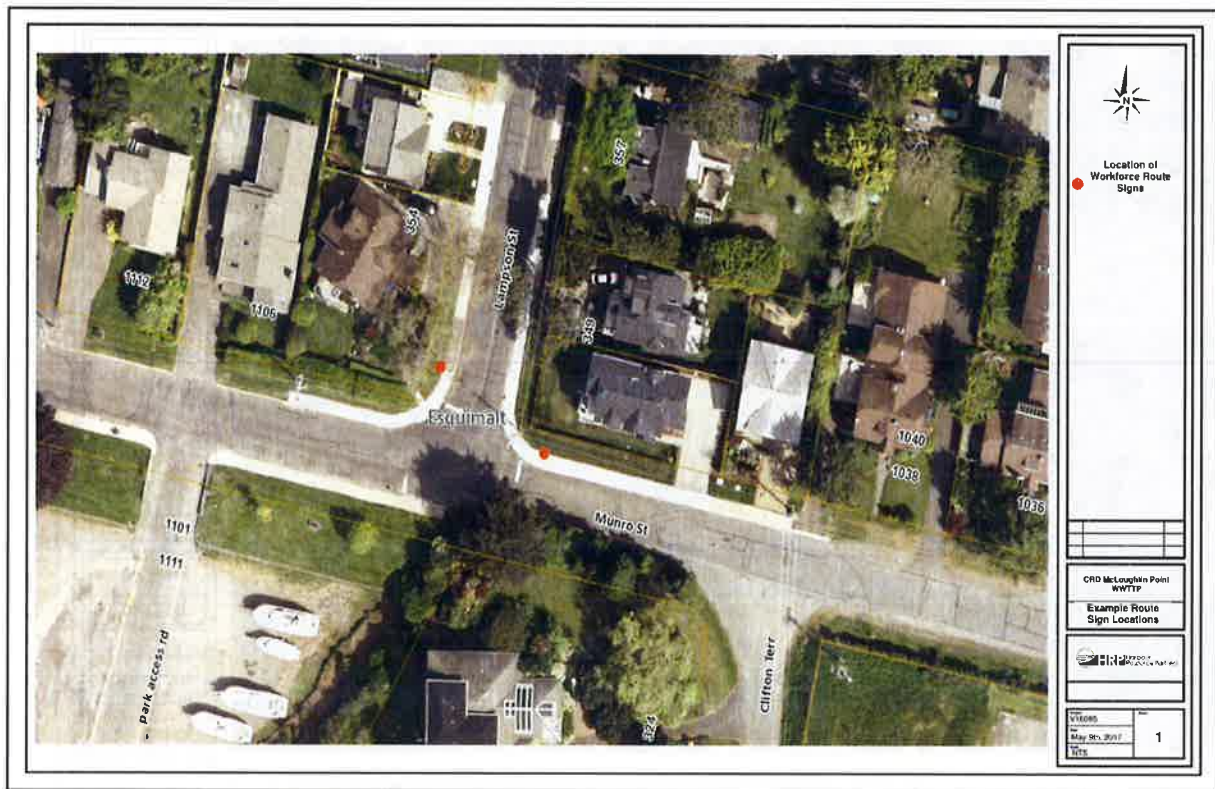














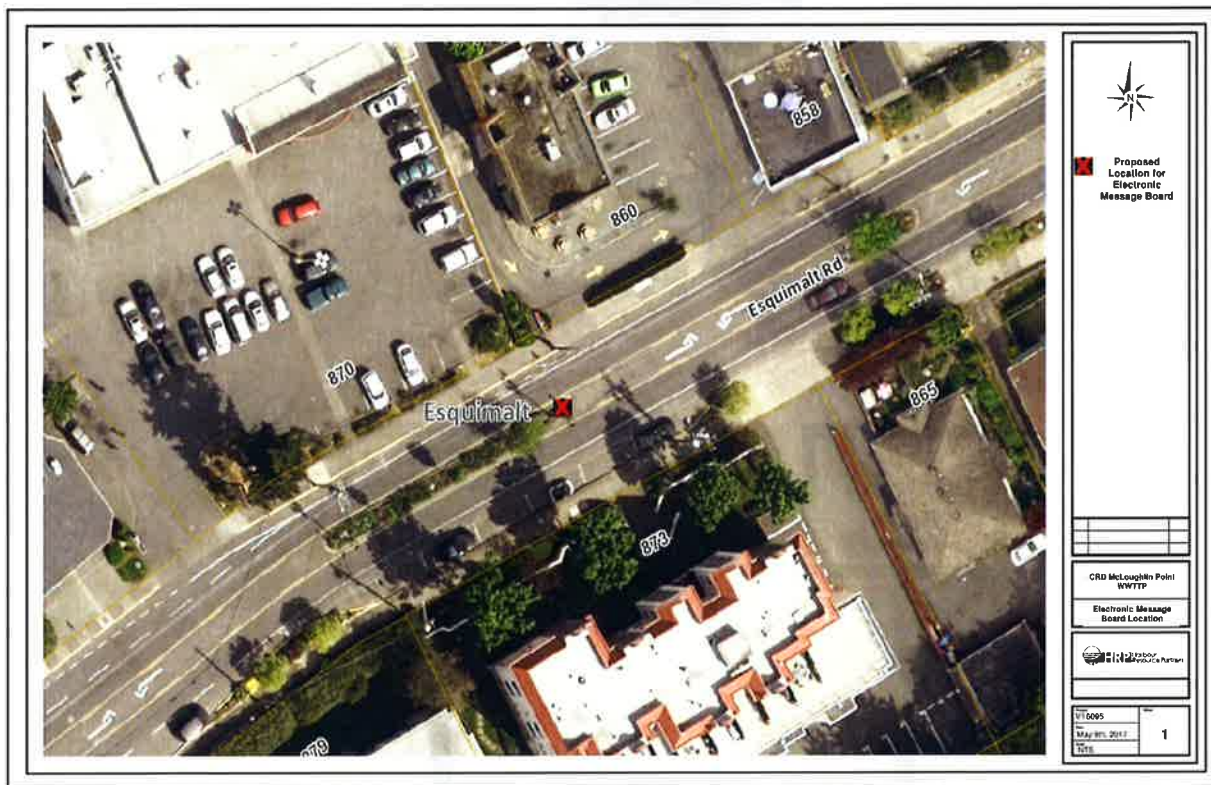

 Location of Radar Speed Sign

CRD McLoughlin Point WWTP Radar Speed Sign Location on Work Area Plans	
	
Title: VTD005 Date: May 10, 2017 Rev: 001	
	1




 Location of Radar Speed Sign

CRD McLaughlin Point WWTP Radar Speed Sign Location on Gault Cres Street	
	
WTE006 May 06, 2017 10:00	1



APPENDIX F – SIGN EXAMPLES



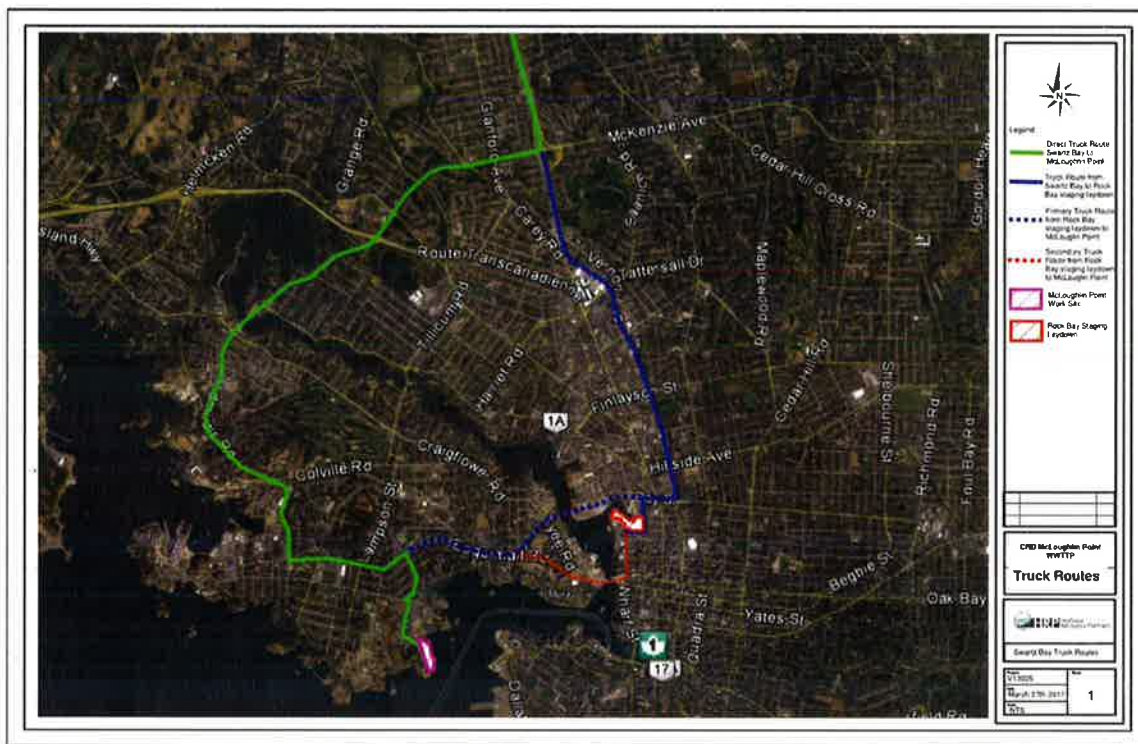
APPENDIX G – RESTRICTED STREETS





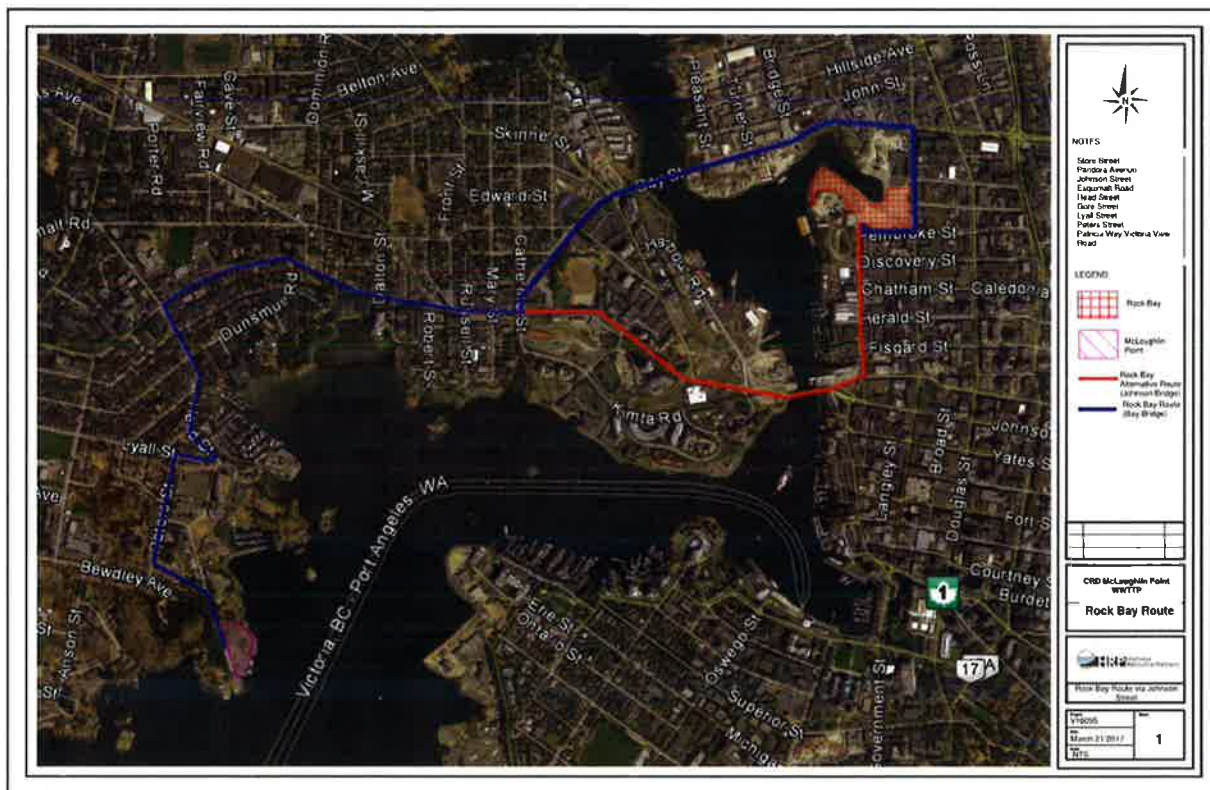
**APPENDIX H – TRUCK TRAFFIC ROUTES BEYOND
ESQUIMALT ROAD**





APPENDIX I – TRUCK TRAFFIC ROUTES FROM ROCK BAY





**REPORT TO INTEGRATED RESOURCE MANAGEMENT ADVISORY COMMITTEE
MEETING OF WEDNESDAY, APRIL 12, 2017**

SUBJECT **Advanced Integrated Resource Management – Next Steps**

ISSUE

To present a summary of the results of the Request for Expressions of Interest for Advanced Integrated Resource Management and outline next steps.

BACKGROUND

At its February 8, 2017 meeting, the Capital Regional District (CRD) Board approved the Advanced Integrated Resource Management (IRM) Project – Request for Expressions of Interest (RFEOI) documentation and directed staff to proceed with issuing an RFEOI. The RFEOI is intended to explore the market interest in beneficially using locally available solid waste and liquid waste residual materials as feedstock for an IRM facility. The information gathered by the RFEOI process will help to initiate the requirement for assessing IRM options, as stipulated in Amendment No. 11 of the Core Area Liquid Waste Management Plan (CALWMP), outlined in Appendix A.

The CALWMP requires the CRD to submit, by May 31, 2017, a work plan that outlines the steps and schedule the CRD will implement to develop a definitive plan for the beneficial reuse of biosolids by June 30, 2019. The CRD is proposing that the CALWMP requirements be met by providing the province with a comprehensive Integrated Resource Management Work Plan (Appendix B).

The CRD received ten RFEOI submissions that propose a variety of IRM technologies, feedstocks and end uses. Appendix C presents an initial high-level assessment of the responses to the RFEOI, prepared by the CRD's independent IRM specialist, HDR Consultants.

The implementation of a full-scale IRM facility, potentially including a pilot project, will likely take about four years, with up to two years for the permitting process and another two years for construction and commissioning of an IRM facility. Development of an IRM facility in the CRD will be subject to significant policy implications and extensive legal, technical, environmental, consultation and notification requirements. In addition, the IRM project will require stringent regulatory approvals, which could include a waste discharge authorization, completion of an environmental impact study and issuance of an operational certificate. Staff will work closely with provincial Ministry of Environment staff to ensure the MOE is proactively engaged on issues that may impact the approval requirements and timelines for this project. Regardless, the best case approval scenario will still require short-term storage, at Hartland landfill, of Class A biosolids generated by the Residual Treatment Facility, starting January 2021.

The CRD's proactive IRM approach is consistent with the requirement by the Minister of Environment for a plan for the beneficial reuse of biosolids, as it integrates solid and liquid waste streams to maximize resource recovery and generate energy/revenue through combined processing of some or all of these materials. The Integrated Resource Management Work Plan outlines the steps required to address the regulatory, technical and policy implications that will allow for the development of a plan for the beneficial reuse of biosolids as part of an integrated

waste management solution. This work plan will be submitted to the Minister of Environment by May 31, 2017.

NEXT STEPS

- May 2017 – once approved by CRD Board, staff will submit the IRM Work Plan to the Province to fulfill the May 31, 2017 deadline under the CRD's Core Area Liquid Waste Management Plan
- June 2017 – staff will present a detailed evaluation and assessment of IRM options based on RFEOI submissions to the IRM Advisory Committee
- June 2017 – staff will present, as required by the CALWMP, a jurisdictional biosolids review and an assessment of the full spectrum of biosolids beneficial uses
- July 2017 – staff will present a draft IRM Project Plan to the IRM Advisory Committee for feedback prior to starting the IRM procurement process

ALTERNATIVES

Alternative 1

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Work Plan be submitted to the Minister of Environment by May 31, 2017; and
2. That this report be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.

Alternative 2

That staff be directed to revise the Integrated Resource Management Work Plan for review by the Environmental Services Committee at its April 26, 2017 meeting.

ECONOMIC IMPLICATIONS

The range of estimated IRM technology costs will be summarized in the detailed RFEOI analysis, to be completed by HDR Consultants for the June 2017 IRM Advisory Committee meeting.

ENVIRONMENTAL IMPLICATIONS

Integrated resource management contributes to sustainability by maximizing beneficial reuse opportunities that recover resources from waste, generate energy, reduce greenhouse gas emissions, and extend the life of Hartland landfill.

The IRM technologies that end up being considered by the CRD will have to be assessed based on the environmental risk of potential contaminants contained in the various available feedstocks.

CORE AREA WASTEWATER TREATMENT IMPLICATIONS

The Core Area Wastewater Treatment Plant Residual Treatment Facility (RTF) procurement has been structured to ensure that up to 50% of raw residuals produced at the McLoughlin treatment plant can bypass the RTF. This contractual and operating flexibility supports the viability of IRM solutions that rely upon the incorporation of both raw residuals and Class A biosolids.

CONCLUSION

The Capital Regional District is working on an integrated resource management solution that integrates solid and liquid waste streams to maximize resource recovery and revenue generation through combined processing of some or all of these regional materials. The CRD received ten Request for Expressions of Interested submissions that propose a variety of IRM technologies, feedstocks and end uses. This report presents an initial assessment of the results of the Request for Expressions of Interest for an Advanced Integrated Resource Management Project.

RECOMMENDATION

That the Integrated Resource Management Advisory Committee recommend to the Environmental Services Committee:

1. That the Integrated Resource Management Work Plan be submitted to the Minister of Environment by May 31, 2017; and
2. That this report be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

RS:ac

Attachments: Appendix A – Letter from Minister of Environment, November 18, 2016
Appendix B – Proposed Integrated Resource Management Work Plan
Appendix C – Initial Assessment of Responses to RFEOI – HDR Inc.



Reference: 305517

November 18, 2016

Jane Bird
 Chair, Core Area Wastewater Treatment Project Board
 Capital Regional District
 PO Box 1000, 625 Fisgard Street
 Victoria BC V8W 2S6

Dear Ms. Bird:

Thank you for your letter of November 17, 2016, regarding my conditional approval of Amendment No. 11 to the Core Area Liquid Waste Management Plan (CALWMP). As requested in your letter, I will clarify my conditional approval of Amendment No. 11 to the CALWMP and have also considered your request to modify my condition for Integrated Resource Management.

To address your concerns, I am revising my September 30, 2016, Conditional Approval of Amendment No. 11. This revised Conditional Approval of Amendment No.11 supersedes my September 30, 2016, decision.

To clarify, Amendment No. 11 includes, but is not limited to, the following:

1. A single 108 megalitre/day wastewater treatment plant located at McLoughlin Point within the Township of Esquimalt capable of tertiary treatment for flows up to 2 times Average Dry Weather Flow (ADWF) for the Core Area up to 2040. For flows that are greater than 2 times ADWF but not more than 3 times ADWF for the Clover Point catchment and up to 4 times ADWF for the Macaulay catchment, primary treatment will be guaranteed. Construction of the wastewater treatment plant will be completed by December 31, 2020.
2. Commitment to advance studies for a wastewater treatment proposal in Colwood, including up to \$2 million to complete the required technical studies and environmental impact assessments.
3. Conveyance of sewage sludge to the Hartland landfill for processing into Class A biosolids, as defined under the Organic Matter Recycling Regulation, for beneficial use and optimization for potential opportunities for integrated resource management.

...2

As a condition of my approval and in accordance with Section 24 (5) of the *Environmental Management Act*, I require the Capital Regional District (CRD) develop a definitive plan for the beneficial reuse of biosolids that does not incorporate multi-year storage of biosolids within a biocell. The Ministry of Environment understands that the plan may need to include short-term storage and/or management options as part of implementing the beneficial reuse plan, but the CRD is strongly encouraged to minimize the need for this. Further, I am amending the deadline for submission of the plan from December 31, 2017, to June 30, 2019, under the condition that the CRD submit, by May 31, 2017, a plan that outlines the procedural steps and schedule it will implement to achieve the definitive plan.

The CRD must ensure that the definitive plan for beneficial reuse of biosolids is supported by an assessment of the full spectrum of beneficial uses and integrated resource management options available for the proposed Class A biosolids produced at the Hartland Landfill, and incorporates a jurisdictional review of how similar-sized and larger municipalities within British Columbia, North America and further abroad, successfully and beneficially reuse biosolids. Ministry staff will assist as necessary and can share the ministry's jurisdictional review of how other similar-sized and larger municipalities reuse biosolids.

The beneficial reuse option selected for treated biosolids must meet the requirements for beneficial use specified in the Canadian Council of Ministers of the Environment *Canada-Wide Approach for the Management of Wastewater Biosolids* (October 11, 2012) and be based on scientific evidence. This definitive plan for the beneficial reuse of biosolids will replace the current proposal to use a biocell for storage.

Please continue to work with staff in the Environmental Protection Division of the Ministry of Environment to ensure that the proposed wastewater treatment facility is registered under the Municipal Wastewater Regulation prior to operation of the plant. Please also inform ministry staff of all beneficial uses of biosolids being considered, in order to ensure all necessary forms of authorization are obtained in advance of discharge.

Additionally, the CRD should continue to engage First Nations and the public on all aspects of the CALWMP.

Be advised that the ministry intends to publically post any reports or other documents received by the CRD on the ministry website related to this conditional approval, the CALWMP and this activity regulated under the *Environmental Management Act*.

Approval of Amendment No.11 to the CALWMP does not authorize entry upon, crossing over or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the local government. This amendment is approved pursuant to the provisions of the *Environmental Management Act*, which asserts it is an offence to discharge waste without proper authorization. It is also the regional district's responsibility to ensure that all activities conducted under this plan amendment are carried out with regard to the rights of third parties and comply with other applicable legislation that may be in force.

Sincerely,



Mary Polak
Minister

cc: Honourable Peter Fassbender, Minister of Community, Sport and Cultural Development
AJ Downie, Director, Environmental Protection Division, Ministry of Environment
Robert Lapham, Chief Administrative Officer, Capital Regional District
Larisa Hutcheson, Interim Project Director, Core Area Wastewater Treatment Project,
Capital Regional District
Sharon Singh, Associate, Bennett Jones Vancouver

PROPOSED INTEGRATED RESOURCE MANAGEMENT WORK PLAN

June 2017	<ul style="list-style-type: none"> • Core Area Liquid Waste Management Plan biosolids requirements: jurisdictional review, assessment of full spectrum of beneficial uses • Detailed review and assessment of Request for Expressions of Interest submissions
July 2017	<ul style="list-style-type: none"> • Draft Integrated Resource Management (IRM) Project Plan • Pre-Request for Qualifications (RFQ) consultation/scope definition for IRM facility
Q3 2017	<ul style="list-style-type: none"> • Review Draft IRM Project Plan with Ministry of Environment (MoE) staff and First Nations for feedback and alignment • Issue Request for Pre-Qualifications (RFPQ) for IRM facility
Q4, 2017	<ul style="list-style-type: none"> • Review/evaluate results of IRM RFPQ and evaluate the feasibility of an integrated solution • Work with MoE staff to finalize IRM Project Plan (including a public consultation plan and timeline)
Q1, 2018	<ul style="list-style-type: none"> • Present full business case and identification of qualified vendors from IRM RFPQ process • Determine regulatory requirements for IRM pilot (if warranted) • Obtain permits for IRM pilot (if warranted)
Q1, 2018 up to Q1, 2019	<ul style="list-style-type: none"> • Conduct IRM pilot project (if warranted) • IRM Request for Proposals (RFP) scope definition and develop IRM RFP document • Secure IRM feedstock commitments/agreements • Confirm IRM resource reuse opportunities • CRD Board decision to proceed • Issue RFP for full-scale advanced IRM facility • Evaluation of IRM RFP submissions and negotiations with preferred bidder • Review of financing options • Determine regulatory approvals and environmental requirements for preferred IRM facility
2019/2020	<ul style="list-style-type: none"> • Permitting process for the long-term advanced IRM facility <ul style="list-style-type: none"> - legal - technical - environmental (EIS) - public consultation, as required • Design and engineering of long-term advanced IRM facility
June 30, 2019	<ul style="list-style-type: none"> • Submit definitive IRM Plan to the Minister of Environment
January 1, 2021	<ul style="list-style-type: none"> • Residual treatment facility starts operation and produces Class A biosolids • Short-term Class A biosolids storage, if required
2021 & 2022	<ul style="list-style-type: none"> • Construction and commissioning of long-term advanced IRM Facility
January 1, 2023	<ul style="list-style-type: none"> • IRM facility starts operation

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Capital Regional District

Initial Assessment, Responses to RFEOI No. 16-1894

Advanced Integrated Resource Management (IRM)

1. Introduction

The Capital Regional District (CRD) issued RFEOI No. 16-1894 as a part of the CRD's exploration of waste management options. Specifically, the CRD desires to better understand the current market capabilities for an integrated waste management solution to manage residues from the Region's existing solid and future liquid waste management facilities. To explore market capabilities, the CRD determined that it would engage the market through an RFEOI and potentially through a subsequent procurement process.

Further the CRD wishes to explore the possibility of integrating solid and liquid waste management interests and maximize resource recovery through integrated processing of some or all of these materials and generate energy/revenue. Completion of the IRM RFEOI process is a critical step in the development of a more definitive IRM plan

2. Overview of RFEOI No. 16-1894

The RFEOI identified that the CRD is seeking a solution or solutions to manage some or all of the following materials:

1. 35,000 tonnes per year of biosolids;
2. 120,000 to 135,000 tonnes per year of general municipal refuse;
3. 8,000 to 12,500 tonnes per year of controlled waste (including screenings and sludge from existing wastewater plants);
4. 15,000 to 20,000 tonnes per year of source separated household organics (kitchen scraps and compostable paper, not including yard and garden wastes); and,
5. 15,000 to 18,000 tonnes per year of yard and garden wastes.

The potential outcome of the RFEOI process could include undertaking a pilot project or directly proceeding to development of a full-scale IRM facility capable at minimum of providing a beneficial reuse solution for the material streams as identified above. The RFEOI clearly indicated CRD is interested in identifying integrated options that present region-wide and/or sub-regional solutions.

Information requested in the RFEOI included:

1. General corporate information;
2. A technical overview of the processing technology;
3. Information regarding reference facilities;
4. Information regarding preferred contract terms, contract structure and allocation of responsibilities; and,
5. Information regarding the need for and interest in undertaking a pilot.

3. Review of RFEOI Responses

The RFEOI was issued on February 16, 2017 and closed on March 20th, 2017. Ten submissions were received. The initial review and assessment of these submissions indicates that:

1. Overall there was a good response to the RFEOI. A reasonable number of submissions were made. Submissions were generally complete and addressed the specific information that was requested.
2. The majority of the respondents are represented in Canada and/or have team members in Canada. This should be helpful during future procurement stages.
3. The majority of respondents proposed approaches capable of integrated resource management including most if not all of the identified CRD solid and liquid waste streams.
4. All of the respondents indicated that their technology was capable of managing the biosolids stream identified in the RFEOI although in some cases there was a lack of clarity as to how exactly it would be managed. In some cases the submissions indicated that they could manage biosolids or sewage sludge.
5. The diverse feedstock sources tend to attract different treatment technologies. Respondents generally focused on organic processes (aerobic/anaerobic) to process organic wastes (biosolids, food waste, yard/garden wastes, the organic fraction recovered from mixed solid waste) and mechanical/thermal processes (RDF, gasification) for mixed waste sources.
6. Reference projects of singular technologies tended to be relevant in terms of similar feedstock, while reference projects from multi-technology proposals tended to reflect only individual components and not the combined systems, as proposed.
7. The majority of respondents prefer that the CRD provide the site for the IRM facility. Many prefer that the CRD owns the IRM facility.
8. The type of business offerings in the submissions were quite varied. Many respondents are open to a variety of development models (DB, DBOM, DBOOT, etc.).
9. The majority of respondents reported their technology as being proven (operating at a commercial level) and do not recommend that the CRD undertake a pilot project. Those

respondents that did not put forward a proven technology, were more interested in, or recommended that the CRD undertake a pilot.

A detailed evaluation of the RFEI submissions is currently underway, and will be used to support the detailed assessment of IRM options.

CALWMP Requirements	Advanced IRM Investigations	Timeline
	RFEOI (10 Submissions)	April 2017
	IRM Work Plan	May 2017
CALWMP Work Plan and Biosolids Review Requirements	Detailed RFEOI Evaluation	June 2017
	IRM Project Plan Preliminary	July 2017
	Request for Pre-Qualification	November 2017
CALWMP Definitive Plan Requirement	IRM Project Plan Finalized	January 2018
	CRD Board IRM Decision to Proceed	March 2018
	IRM Procurement	April 2018
	Permitting and Design	2019-2020
	Construction	2021-2022



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Open meeting
Late Agenda Item.
CALWME. May 10/17

May 5, 2017

File: 0220-20
Core Area Wastewater Treatment Project Board

Dear CRD Chair & Directors,

RE: Resolution from the Integrated Resource Management Advisory Committee

On behalf of the Core Area Wastewater Treatment Project Board ("**Project Board**"), I am writing to you regarding the following resolution from the Integrated Resource Management Advisory Committee's April 12, 2017 closed meeting (the "**Resolution**"):

That the IRM proposals be sent to the Project Board for their information and request:

1. that the Project Board review the IRM timelines and see how the IRM project can be aligned with what the Project Board is doing;
2. that the Project Board evaluate the proposals;
3. that the Project Board review elements of the applications with a view towards controlling the total costs on the region, maximizing possibilities for resource recovery and streamlining processes; and
4. that the Project Board consider up to 100% raw sewage and owned finance options

During its meeting on May 2, 2017, the Project Board considered the Resolution, and the Project Board's role in the IRM planning process being led by the CRD. The Project Board is unable to act on the Resolution because the requests are not within the scope of duties defined in the Project Board's terms of reference. Further background to the Project Board's response follows.

1. Funding Agreements

As you are aware, the Wastewater Treatment Project ("**the Project**") consists of three main elements:

- the McLoughlin Point Wastewater Treatment Plant,
- the Residuals Treatment Facility, and
- the Conveyance System.

The Project cost of \$765 million is being funded by the federal and provincial governments, and the CRD.

The Government of British Columbia will provide up to \$248 million towards the three components of the Project and P3 Canada will provide up to \$41 million towards the Residuals Treatment Facility. The funding by P3 Canada and the Government of British Columbia is intrinsically linked to the entire Project. The construction of the Residuals Treatment Facility cannot be extracted without placing the entire funding amounts from these funding partners at risk.

2. Regulatory Context

The Project must satisfy the regulatory requirements applicable to wastewater treatment. The funding agreements, as expected, require the Project to comply with all applicable laws as a condition of the funding.

The CRD is legally obliged to treat wastewater, and those legal obligations extend to the treatment byproducts, including biosolids. Federal and Provincial regulatory requirements apply to biosolids quality, the environmental implications, and the management of wastes. In British Columbia, the Organic Matter Recycling Regulation applies to the production, distribution, storage, sale, and use of biosolids and compost.

The inclusion of the Residuals Treatment Facility in the Project as part of the solution for treating the Core Area's wastewater satisfied the regulatory requirements, and therefore the funding partners. The processing of sewage sludge into Class A biosolids is part of the approved Core Area Liquid Waste Management Plan ("CALWMP") Amendment 11. In addition, the Minister of Environment's approval of the CALWMP Amendment 11 is conditional upon the CRD submitting a definitive plan for the beneficial reuse of biosolids by June 30, 2019 and to ensure the definitive plan for beneficial reuse of biosolids is supported by an assessment of the full spectrum of beneficial uses and integrated resource management options available for the Class A biosolids that will be produced.

3. Operational Context

Biosolids comprise only a small proportion of the total combined biosolids, organics and municipal solid waste streams that must be integrated to create an effective IRM plan. As a result, the potential for IRM in the Core Area will be predominantly driven by the solid waste streams. Thus, IRM planning properly resides within the Solids Waste Management Plan rather than as a separate aspect of wastewater treatment within the Liquid Waste Management Plan.

The Residuals Treatment Facility and the chosen site of Hartland landfill optimises the integration of biosolids with the current and future solid waste program. Hartland landfill receives about 140,000 tonnes of municipal solid waste per year and offers operational synergies and IRM opportunities with biosolids processing.

4. Residuals Treatment Facility

Given the above, there is no conflict between the IRM planning process and the construction and operation of the Residuals Treatment Facility. The Project Board, as part of the liquid waste management planning, has ensured that the Project provides the CRD the flexibility and the ability to accommodate an IRM planning process either now or in the future. As discussed in greater detail in the Core Area Wastewater Treatment Program Business Case dated September 7, 2016, that was approved by the CRD Board on September 14, 2016, the Project Board considered a wide spectrum of biosolids treatment technologies in its analysis. In recommending the production of class A biosolids at Hartland landfill, the Business Case recognised that the biggest opportunity for IRM at the CRD exists with the potential integration of the various waste streams that may be available at the Hartland Landfill.

Furthermore, the Project Board have structured the Residuals Treatment Facility contract to ensure that up to 50% of raw residuals produced at the McLoughlin Point Wastewater Treatment Plant can bypass the Residuals Treatment Facility. As noted in the April 12, 2017 report entitled 'Advanced Integrated Resource Management – Next Steps', that the Project Board received for information, this contractual and operating flexibility supports the viability of IRM solutions that rely upon the incorporation of both raw residuals and class A biosolids.

The Project Board appreciates the work of the IRM Committee in leading the planning and development of a comprehensive IRM plan. The Project Board is maintaining the alignment by ensuring that, through the CRD Chief Administrative Officer, the CRD IRM Advisory Committee is aware of the Project's activities, specifically as they relate to the production of biosolids.

I trust that the above information provides useful background and explains the Project Board's complementary functions.

Yours truly,



Robert (Bob) Lapham, MCIP, RPP
Chief Administrative Officer

cc: Core Area Wastewater Treatment Project Board
Dave Clancy, Project Director, Core Area Wastewater Treatment Project